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Republic of Korea
Appraisal of a Vocational Training Project

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Education Projects Division
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CURRENCY EQUIVALENTS

US$1	=	Won 485
Won 1	=	US$0.00206

FISCAL YEAR

January 1 - December 31

GLOSSARY

CVTI	-	Central Vocational Training Institute
KDI	-	Korea Development Institute, (a Government agency in charge of economic research)
MOE	-	Ministry of Education
MOST	-	Ministry of Science and Technology
OLA	-	Office of Labor Affairs, the agency of the Ministry of Health and Social Affairs responsible for vocational training
OSROK	-	Office of Supply of the Republic of Korea, the agency responsible for Government procurement
RVTC	-	Rural Vocational Training Center
VTI	-	Vocational Training Institute
VTB	-	Vocational Training Bureau
Middle Schools:		Junior secondary schools (grades 7-9)
High Schools:		Senior secondary schools (grades 10-12)
Higher Schools:		Institutions currently offering secondary (grades 10-12) and post-secondary (grades 13-14) vocational courses in engineering, agriculture and forestry, fishery and marine, and medicine and pharmacy education; these schools have been converted into Junior Vocational Colleges, phasing out grades 10-12.
Junior Colleges:		Post-secondary institutions (grades 13-14)

REPUBLIC OF KOREA

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REPUBLIC OF KOREA

BASIC DATA

1975

General

Area	98,477 km^2
Population (1975 mid-year estimate)	35.3 million

Enrollment (including private schools)

Primary school level (grades 1-6)	5,599,074
As percentage of 6-11 year age group	104%*
Middle school level (grades 7-9)	2,026,823
As percentage of 12-14 year age group	74%*
High school level (grades 10-12)	1,123,017
As percentage of 15-17 year age group	55%*
Post-secondary level (grades 13-16)	297,000
As percentage of 18-21 year age group	8%*

Public Expenditure on Education and Training

Total Expenditure	Won 520 billion
As percentage of GNP	5.6%
Ministry of Education expenditure	Won 212 billion
As percentage of total Government expenditure	16%

*Includes overage students

REPUBLIC OF KOREA

APPRAISAL OF A VOCATIONAL TRAINING PROJECT

SUMMARY AND CONCLUSIONS

i. This report covers the appraisal of a Vocational Training Project in the Republic of Korea for which Bank assistance of US$23.0 million equivalent is proposed. Three other education projects are being assisted under Credit 151-KO (1969), Loan 906-KO/Credit 394-KO (1973), and Loan 1096-KO (1975) amounting to US$14.8 million, US$43.0 million and US$22.5 million, respectively. The first project, which aimed at qualitative improvements and selective expansion of education in the fields of industry, commerce, agriculture, and teacher training at secondary and post-secondary levels, was completed in 1976; the objectives of the first project were met or exceeded in both physical and educational terms. The second project continued to assist the Government economic development policies and emphasized equipment for science and technology education. The project is now progressing satisfactorily after some initial delays in equipment procurement. The third project, which extends assistance to fishery and marine education and vocational training, is also making satisfactory progress.

ii. Although Korea has few natural resources and a high population density, it has succeeded in changing from an agrarian society in the early 1960s to a sophisticated industrialized country. This has meant an increasing emphasis on skill-orientation. The accelerated pace of industrial development and complex production methods call for a technically more competent labor force. Therefore, large-scale investments will continue to be required for education and training. Among the categories of technical manpower needed (scientists/engineers, technicians, and skilled workers), training requirements for semi-skilled and skilled workers rank foremost. The establishment of a sound vocational training system, complementing the industrialization policy, is therefore an essential ingredient of the economic development process.

iii. There are three main sources for the supply of semi-skilled and skilled industrial workers in Korea: (a) technical high schools under the Ministry of Education (grades 10-12), (b) vocational training centers with courses ranging in duration according to need, and (c) on-the-job training in industry. A significant component, even though still comparatively small, is the network of Vocational Training Institutes (VTIs) under the Office of Labor Affairs (OLA). At present, 7 VTIs are in operation; another 9 are to be established before 1980. However, the vocational training system still has to overcome a shortage of instructors and instructor-trainers. In addition, the administrative capabilities of the Vocational Training Bureau (under OLA)

need to be broadened in view of the increased responsibilities associated with an expanded VTI system and the implementation of the Basic Law for Vocational Training. The proposed project is in accordance with the Government's policy of strengthening and expanding the facilities for vocational training through the establishment of eight additional VTIs within the Fourth Plan Period.

iv. The proposed project would constitute the second phase of the Bank's support for Korea's vocational training system and would pursue the following main objectives of:

(a) contributing to the supply of technical manpower at skilled and semi-skilled workers levels needed for the country's industrial development;

(b) providing out-of-school youth with a means to acquire skills that would make them employable in industry;

(c) strengthening vocational instructor training, and

(d) giving technical assistance in support of the country's efforts in the field of in-plant vocational training.

v. The proposed project would include the following:

Item	Number of Places			Increase (%)	Additional Output Per Annum
	Existing /a	New	Total		
Eight VTIs /c	6,900	3,600	10,500	53	5,400 /b
Central Vocational Training Institute (CVTI)	660	90	750	14	50
Technical Assistance					

/a 16 VTIs now operating or being established.

/b Assuming 1-1/2 shift operation (regular courses only).

/c Numbers rounded to nearest 100.

vi. The total project cost is estimated at US$56.2 million. This includes the cost of staff housing (to be financed by the Government), the UNDP and bilaterally financed technical assistance, and contingencies. The foreign exchange component is estimated at US$29.1 million equivalent, or 52% of total project cost. Implementation is expected to last about four and a half years. The proposed project would be administered by the OLA project unit (PIU) established under the Third Education Project. The Government has informed the Bank that the existing project unit in the OLA has been strengthened by three additional full-time staff members; this will enable it to carry out the added responsibilities for implementation and supervision as a result of the proposed vocational training project.

vii. The OLA has communicated to the Bank the outlines of a plan to eliminate shortages of VTI instructors and CVTI instructor-trainers. It has also prepared a staff expansion program to strengthen vocational training administration of the Office of Labor Affairs (OLA) that would increase the staff of the Vocational Training Bureau (VTB) by about 30 and the staff in OLA's provincial branch offices by 110.

viii. The PIU would work closely with the Office of Supply, Republic of Korea (OSROK) for the procurement of civil works, furniture, and equipment. Contracts for civil works and furniture would be awarded on the basis of competitive bidding open to Korean and foreign firms following domestic advertising and local procedures satisfactory to the Bank. Awards of civil work contracts of US$250,000 or more and of equipment and furniture contracts of US$100,000 or more would require prior Bank approval. Equipment contracts of US$100,000 or more would be awarded on the basis of international competitive bidding. Suitably qualified domestic manufacturers of equipment would be allowed a margin equivalent to the existing customs duties for competing imports or 15% of the c.i.f. price, whichever is lower. Equipment that cannot reasonably be grouped to form contracts for at least US$100,000 equivalent and aggregating less than US$3.5 million equivalent could be awarded without prior Bank approval on the basis of competitive bidding advertised locally following Government procedures acceptable to the Bank. Off-the-shelf items not exceeding US$10,000 in each contract and aggregating less than US$500,000 equivalent could be purchased on the basis of a minimum of three quotations.

ix. Bank assistance would meet 41% of the estimated total costs. Disbursements would be made against 100% of the c.i.f. cost of directly imported equipment; 100% of the ex-factory cost of locally manufactured equipment; 70% of the imported equipment locally procured; 25% of expenditures (excluding staff houses) on civil works, professional services, and furniture; and 100% of the expenditures on technical assistance (excluding UNDP and bilaterally financed components).

x. The proposed project would expand the annual output of VTIs by 53% and contribute about 6% of the average annual training needs during the Fourth Five-Year Plan period (1977-81) and would result in an approximately balanced supply and demand of skilled workers (craftsmen) after project completion. Improvements in facilities, equipment, instructor training, and particularly administrative capability would ensure a uniformly high quality of the VTI system and would enable OLA to cope more effectively with its additional responsibilities in the field of vocational training, in particular the monitoring of in-plant training.

xi. The proposed project forms a suitable basis for a Bank loan of US$23.0 million equivalent to the Republic of Korea, with a term of 17 years, including a grace period of 3-1/2 years.

REPUBLIC OF KOREA

APPRAISAL OF A VOCATIONAL TRAINING PROJECT

I. INTRODUCTION

1.01 This report covers the appraisal of a Vocational Training Project for which a Bank loan of US$23.0 million is proposed. The proposed Vocational Training Project has been preceded by three World Bank Group education projects in Korea. The first project, supported by Credit 151-KO of 1969 (US$14.8 million equivalent), was designed to contribute to improvements in the educational system in accordance with projected manpower requirements (Appendix I). These improvements included extensions to, and equipping of, 27 technical, commercial, agricultural, agricultural-technical, and comprehensive high schools (including three new technical high schools); one post-secondary agricultural and four technical schools; four university departments of education; and related technical assistance. Project implementation was initially delayed because of the late arrival of consultants and relative inexperience of project staff with equipment procurement, but proceeded well later on. The Credit was closed on September 30, 1976, 21 months after the original date. Both the Bank's project completion report and the Government's final evaluation have concluded that the project has met or exceeded its most important objectives in both physical and educational terms.

1.02 The Second Education Project, supported by Loan 906-KO/Credit 394-KO of 1973 (US$43 million equivalent), continued to assist the Government in its economic development policies through an improved alignment of the education sector to the needs of agriculture, industry, and social development (Appendix I). The project consists of equipment and extension of buildings for 18 technical and 14 agricultural high schools and 43 post-secondary institutions in selected fields where manpower shortages have been identified. The project is about 12 months behind schedule because of time-consuming procurement procedures and under-staffing of the procurement unit in the Office of Supply, Republic of Korea (OSROK). Progress on civil works was temporarily slowed because of a shortage of counterpart funds in 1976; these difficulties have now been overcome. The project is expected to be completed about one year after the original Closing Date (December 31, 1977).

1.03 The Third Education Project, supported by Loan 1096-KO of 1975 (US$22.5 million equivalent), is also providing assistance for the Government's manpower development policies (Appendix I). It comprises two subprojects: one, under the Ministry of Education, finances facilities and equipment for one new technical high school, three fisheries high schools, one marine junior college and one fisheries college; the other, under the Office of Labor Affairs, finances seven new Vocational Training Institutes, as well as engineering and technical services for the preparation of future projects. The project is currently six

months behind schedule mainly because of temporary difficulties with counterpart funds. These shortages resulted in part from the delay in the Second Education Project, and the ensuing bunching of financial requirements. Although sufficient counterpart funds for the Office of Labor Affairs subproject have been provided for 1977, there is a shortfall in domestic funding for the Ministry of Education subproject for 1977 relative to the appraisal schedule for physical project implementation. The Government has confirmed that sufficient funds will be made available in 1977 and 1978 for the implementation of existing education projects.

1.04 The proposed fourth project on vocational training is based on the recommendations of a Bank project identification mission that visited Korea in May/June 1976. It was prepared by Government authorities and was appraised in October 1976 by a Bank mission consisting of R. Harris (vocational training specialist, Unesco), A.S. Naimie (architect), and H.H. Thias (economist and mission leader). The project would cost an estimated US$56.2 million equivalent, with a foreign exchange component of US$29.1 million.

II. DEVELOPMENT AND MANPOWER NEEDS

Socioeconomic Background

2.01 Korea's population of approximately 35 million (1975) is growing at an annual rate of about 1.8%, compared to over 2% in the 1960s. This decrease, brought about by Government efforts in the field of family planning and the progressive urbanization of society, will permit an increasing share of education budgets to be devoted to the development of post-primary education levels and to quality improvements throughout the education system, thus supporting the demands made on the education system by society and the economy.

2.02 With few natural resources and a population density exceeding 350 persons/km^2, Korea has become, by necessity, one of the foremost examples among developing countries of a skill-oriented economy. Starting in the early 1960s as a largely agrarian country, Korea passed through the stages of import substitution and development of export capabilities for consumer goods (such as clothing), then continued this process to include intermediate products (e.g., fabrics and electronic products), and is currently expanding into the export production of capital goods (e.g., machinery and transportation equipment). The logical continuation of this process will be the emergence, by the 1980s, of an advanced industrialized economy similar in structure and technological complexity to today's advanced industrial countries.

2.03 This process of growth and restructuring is reflected in sectoral output and employment figures over the last 10 years (see Annex 1):

(i) The primary sector (agriculture, forestry, and fisheries) experienced a decline of its share in GNP from 38% in 1965 to about 25% in 1975 and in employment from 59% to 46%.

(ii) The secondary sector (mining and manufacturing) increased its percentages in GNP and employment from 20% to 30% and from 10 to 19% respectively.

(iii) The tertiary sector's (social overhead capital and others) share in GNP grew from 42% to about 45% and in total employment from 31% to 35%.

2.04 During the period of the Fourth Five-Year Plan (1977-81), the Government expects a continuation of these intersectoral shifts, resulting in a 1981 GNP allocation of 20:37:43 among the three major sectors and of 39:25:36 for total employment.

Economic Development and Manpower Requirements

2.05 The accelerated pace of industrial development and the increasing complexity of production processes call for a labor force with a higher degree of technical competence at all occupational levels. This in turn will require continuing large-scale efforts in education and training. Demand and supply projections for technical manpower have for the past 10 years determined the general direction for investment decisions in technical education and vocational training. These estimates are periodically updated to take into account new manpower survey data and the gradual expansion of relevant training capacities. With the exception of a broad long-range plan for the period 1967-86, the projections do not extend beyond the period of the Fourth Five-Year Plan (i.e., 1981).

2.06 The estimates are aggregated into three broad categories of technical manpower: scientists/engineers, technicians, and skilled workers 1/. They indicate an excess supply of scientists/engineers (resulting in a net surplus of 6,000, or 5% of the estimated 1981 stock over the five-year period) and a continuing and increasing deficit of technicians (an aggregate deficit of 8,000 or 6% of the 1981 stock). In view of a possible underestimate of the supply capacities and of the inevitable margins of error inherent in manpower projections, it is expected that the aggregate supply of subprofessional and professional manpower will be roughly in balance with the likely requirements of the economy (see Annex 2).

2.07 For the category of skilled workers (craftsmen and operatives), the projections indicate that the period 1977-81 will be characterized by sizable deficits, totaling over 300,000 (Annex 2) or 20% of the estimated 1981 stock. This situation justifies a continuation of the Government's reliance on a variety of vocational training modes to exploit, to the extent possible, the potential of the formal and non-formal training systems as well as of in-plant training.

1/ In Korea , the term "skilled worker" applies to occupations that would be classified as "skilled" (craftsmen) or "semi-skilled" (operatives) elsewhere. Unless otherwise indicated, this report follows the Korean terminology.

2.08 The urgency of the training needs recommends a combination of intensive preemployment vocational training courses that could produce the requisite level of trade competence within an acceptable time (one year for industrial trades except the most complex), and of large-scale upgrading of skilled workers through special short-term courses. This upgrading would preferably be conducted in the plant to take into account the needs of individual industrial establishments. The smaller firms would either have to pool their resources to establish training facilities or rely on the public system of vocational training.

2.09 Based on present relative training capabilities and expected additions to them, the Government has allocated the training targets (in terms of numbers of trainees) as follows: the formal system (under the Ministry of Education) is to train 30% and non-formal modes (directly or indirectly under the Office of Labor Affairs) are to train 70%. Of the latter share, 15% has been attributed to the Vocational Training Institutes, and 55% to in-plant training schemes.

2.10 A recent attempt by staff of the Korea Development Institute (KDI) to disaggregate demand and supply figures into skilled and semi-skilled workers appears to shed new light on the question of training deficits for industrial workers: for the subcategory of craftsmen (skilled workers), the cumulative deficit for the period 1977-81 amounts to about 20,000, or 2% of the estimated 1981 stock; the shortfall for operatives (semi-skilled workers) remains substantial at almost 300,000 or 40% of the 1981 stock (Annex 2). Although some of the assumptions underlying these estimates (e.g., for the replacement requirements) may be contested, the results of this exercise imply that the training deficit for skilled workers could be converted to a situation of approximate balance through the proposed further investments in vocational training, whereas the size and diversity of future training tasks at the lower skill levels would call for training arrangements within the private sector, supported by the Government's system of technical education and vocational training.

III. THE VOCATIONAL TRAINING SYSTEM

3.01 There are three main sources for the supply of semi-skilled and skilled industrial workers in Korea: (a) the technical high schools 1/ (under the Ministry of Education), whose students follow a three-year course (grades 10-12); (b) vocational training centers with a variety of public or private sponsors and with courses ranging in duration from a few weeks to two years; and (c) on-the-job training in industry.

1/ Training in industrial trades is carried out in technical high schools, in some agricultural and in comprehensive high schools. The more general term "vocational high school" applies to all non-general high schools: agricultural, technical, commercial, comprehensive, etc.

Technical High Schools

3.02 Enrollments in the country's 42 public and 30 private technical high schools account for roughly one-quarter of the 480,000 vocational high school pupils. The programs encompass 12 trade clusters in 3 broad areas: mechanical, electrical, and chemical engineering. Curricula contain about 60% theoretical subjects and 40% practical work, resulting in an accumulated workshop practice of some 1,250 hours over the 3-year course. This means that the degree of practical proficiency that can be attained is in most cases slightly below that required for the skilled-worker level and that this skill gap has to be closed during initial on-the-job training. However, the amount of theoretical instruction provided means that the graduates may, during their work life, enjoy a greater degree of occupational flexibility (subsequent lateral transfers to another skilled worker job) and also the possibility of occupational growth (subsequent vertical transfers to the level of supervisor or technician).

3.03 Lack of appropriate equipment has in the past seriously hampered the proper operation of the technical high schools. In 1968, good quality (i.e., fully equipped) schools had a total annual output of about 2,000; at present, the figure is about 7,000. With the upgrading of existing, and establishment of new, technical high schools under the Bank Group's three education projects (paras 1.01 - 1.03) and the simultaneous increase in class size from 40 to 60 students, the annual output of well-trained graduates can be expected to increase to some 28,000 by 1980. This figure accounts for slightly more than half of the 52,000 graduates from technical high schools anticipated by the manpower projections. The Government currently plans to upgrade the remainder of the technical school system using its own resources. The tentative allocation in the Fourth Plan for the improvement of vocational high schools (W 66.4 billion = US$135 million) appears to be broadly consistent with this aim 1/.

Vocational Training

3.04 Vocational training facilities (other than vocational high schools) can be grouped in three main categories: those sponsored by Central Government agencies, by Local Government agencies, and by the private sector.

3.05 Sponsored by Central Government Agencies. The Central Government subsystem includes a total of 56 centers with about 16,500 trainees in 1976. The bulk of the training was sponsored by three agencies: the Ministry of Justice (about 6,500 trainees), the Ministry of Defense (4,000), and the Office of Labor Affairs (5,000). The remaining trainees were enrolled in six smaller centers operated by the National Railroads, the Veterans' Administration, the Office of Monopoly, and the Ministry of Commerce and Industry.

3.06 Sponsored by Local Government Agencies. Local (mainly Provincial) Governments operate 15 vocational training facilities with slightly

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1/ The bulk of this investment would be allocated to technical schools.

over 3,000 trainees. Of these, the 8 Rural Vocational Training Centers (RVTCs), established with UNICEF/ILO assistance and enrolling about 500 trainees in 6-month courses, have been especially effective in catering to the manpower needs of rural areas. The skills taught include farm machinery maintenance and repair, domestic electricity, basic fitting, automobile repair, radio/television repair and, for women, knitting and dress-making.

3.07 Sponsored by the Private Sector. Privately organized vocational training falls into two broad categories: (a) accredited vocational training (i.e., recognized by the Office of Labor Affairs (OLA) following specific qualitative criteria) in nonprofit institutions organized as "Juridical Bodies" under public law, and (b) in-plant (on-the-job) training. The first category comprises 34 centers with 111 1/ trades and slightly over 15,000 trainees. The second, in-plant vocational training facilities, includes 396 centers 2/, with 514 trades 1/ and about 39,000 trainees 2/. It is estimated that about a third of the 1,350 nonagricultural establishments with more than 200 employees that have a vocational training obligation (see para 3.26) at present have vocational training facilities (assuming that none of these facilities was operated by smaller firms). Annex 3 gives a breakdown of in-plant training by groups of trades and type of courses.

Vocational Training Institutes

3.08 The most significant component of vocational training under the Central Government, even though it is still comparatively small, is the network of Vocational Training Institutes (VTIs) under the Office of Labor Affairs (OLA). There are several reasons for this prominence: the close institutional links between OLA and industry, the foreign sponsoring of virtually all VTIs 3/ (leading to an influx of a wide range of expatriate expertise and uniformly high equipment standards), and the concentration on key industrial trades (currently 18, see Annex 4).

1/ Not 111 different trades but rather separate trade courses; only in the case of the Vocational Training Institutes (VTIs) and Rural Vocational Training Centers (RVTCs) is the number of different trades known.

2/ No trade and trainee data available for 15 additional facilities.

3/ The Central Vocational Training Institute (CVTI) received UNDP/ILO assistance; three VTIs were established through bilateral aid from Belgium, the Federal Republic of Germany, and Japan; five were financed by ADB, and seven will be built under the Bank's Third Education Project. One VTI received USAID assistance and private donations from abroad.

3.09 At present, seven VTIs are in operation. In 1977, two more VTIs will open; they will be joined by five VTIs in 1978 and by two VTIs in 1979 financed under the Bank's Third Education Project. By 1980, OLA will be operating 16 VTIs with a total of almost 7,000 places and will be able to train annually more than 10,000 skilled workers in 1-1/2 shift operation (Annex 4).

3.10 VTIs enroll middle-school (grade 9) leavers in a one-year regular course. The total program comprises just under 2,000 periods, of which 20% are theoretical subjects and 80% (or about 1,600) are workshop practice. This compares well with the 1,250 hours of workshop instruction given over the three-year course of technical high schools (para 3.02). At the end of the year, the trainees undergo the Class II craftsman test, consisting of a theoretical exam and a practical skill test (both considered demanding by international comparison). The pass rates in this trade test at one of the two VTIs that have been operating for more than one year averaged 90% over the last three years - twice the national average of 45% for all test applicants. Employment rates for VTI leavers average 95%.

3.11 Besides the regular day course, VTIs organize evening courses that can be replicas of the day course (the same number of trainees are enrolled but are spaced over two years) or specific short-term upgrader, refresher, or adaptation courses for industrial workers (estimated enrollments 500).

3.12 Vocational Training Instructors. VTI instructors are recruited among high school leavers (grade 12 completed) and trained in a two-year course at the Central Vocational Training Institute (CVTI) at Incheon, near Seoul. The program devotes 1,030 periods to the theoretical aspects of the trade chosen, 2,400 periods to related workshop practice, and 550 periods to pedagogy. The CVTI is also conducting short-term training courses for in-plant vocational instructors. Although there is a continuing demand for this training, only 20% of the 800 course completers have become in-plant instructors, mainly because the instructors were trained well before the respective in-plant training facilities were established.

3.13 VTIs suffer from a shortage of instructors. Of the 670 graduates of the CVTI program (between 1971 and 1975), only 60% have become instructors at the VTIs, the remainder having been drafted into military service (30%) or recruited at more attractive salaries by industry (10%) (Annex 5A).

3.14 There is a more serious shortage at the CVTI of instructor-trainers, who are usually recruited among graduates of university engineering departments. The position and salary of a CVTI instructor-trainer are apparently inferior to those of alternative job opportunities for those graduates. As a result, 51 (52%) of the budgeted teaching positions in the CVTI were vacant at appraisal time. These difficulties have occasionally been compounded by the transfer of CVTI personnel to key positions in newly opening VTIs, a practice that should be discontinued. The relative shortages of CVTI trainers not only are much more serious than those of VTI instructors (52% versus 17%) but, because of the multiplier effect on the supply of the latter, are more damaging for the whole VTI system.

3.15 These weaknesses require prompt and determined action. The Government has already adopted a measure that could make an important contribution to solving this problem: the provision of rent-free staff housing for all VTIs and the CVTI. This policy, which would amount to an increase in real salaries of up to 100% (depending on the location of the VTI), should reduce the attrition rate of VTI instructors, i.e., losses after recruitment; however, this measure may not help to recoup losses that occur on graduation. The nature of these losses (para 3.13) suggests that a combination of specific preventive measures and active recruitment efforts may be needed, in addition to the incentive of staff housing.

3.16 Examples of such measures are as follows:

(i) Bonding of CVTI graduates for a period of four years (in analogy to the bonding of VTI graduates; see para 3.23);

(ii) Considering for enrollment in instructor courses only persons who have already completed military service or who are exempted from it;

(iii) Actively recruiting CVTI graduates drafted into the army when their tours of duty are nearing completion;

(iv) Recruiting experienced workers from industry for a fixed period (preferably those who have participated either in VTI instructor courses or in CVTI training courses for in-plant instructors but who are presently not teaching (para 3.12); the latter group may have to be given some additional intensive instruction of short duration); and

(v) Hiring, possibly on a part-time basis, experienced industrial workers to serve as auxiliary instructors under a VTI instructor.

3.17 Although the effect of any of these measures (including the provision of staff housing) is difficult to assess, an attempt has been made to project instructor supply figures, assuming that a combination of bonding, enrollment after military service and housing provision would result in reducing (a) post-graduation losses to 10% and (b) the attrition rate of posted VTI instructors to only 5% per annum. This would lead essentially to a balance of instructor supply and demand during the period of the Fourth Plan (1977-81) (Annexes 5B and 5C). By contrast, the unchecked continuation of instructor losses could lead to temporary deficits of more than 400 instructors, making the VTI system partially inoperable.

3.18 In the case of instructor trainer deficits, the options are more limited, as there is no legal basis for bonding, and the potential instructor-trainers may already have completed their military service. Apart from desisting from CVTI staff transfer to the VTIs (para 3.14), possible measures could include:

(i) Transfering qualified and experienced VTI personnel to the CVTI;

(ii) Recruiting, possibly on a part-time basis, qualified personnel from industry; and

(iii) Similarly recruiting from institutions of higher education.

3.19 Administration. Direct supervision of the VTIs and the CVTI and indirect supervision (development of curricula and training materials, participation in the skill testing process) of other vocational training is vested in the Vocational Training Bureau (VTB) of OLA (see Appendix II and Chart 1). This office has 18 professional staff, clearly an inadequate number given the imminent increase of the VTI system (para 3.09). Furthermore, new administrative and technical tasks will arise from the implementation of the Basic Law for Vocational Training (see para 3.26 and Appendix III). Examples are (a) the establishment of aggregate, sectoral, and occupational training targets on a year-by-year basis; (b) the review of annual training programs for the establishments falling under the Law; or (c) the determination of contributions to the Cost-Sharing Fund for Vocational Training (see Appendix III). This will require an expansion and strengthening of the Vocational Training Bureau. OLA has prepared an outline of the future scope and composition of the VTB, including estimates of necessary staff increments (Appendix II and Chart 2), and amounting to an increase in VTB's staff of 28 and to an addition of 110 positions to the provincial branch offices of OLA to deal with vocational training administration.

3.20 Cost and Financing. The recurrent VTI expenditures per trainee-hour amount to W 200 (US$0.40), and per trainee-year to W 400,000 (US$820). This compares to about W 125 per hour and W 400,000 (the total for the three-year course), respectively, in a well-equipped technical high school. The difference is explained by a lower trainee/instructor ratio (9 versus 19), the higher percentage of workshop practice, and a more expensive (in terms of consumable materials) trade mix in the VTIs. Because of the different objectives of these two types of institutions (see paras 3.02 and 3.10), there are obvious limitations to any cost-effectiveness conclusions.

3.21 The total VTB budget amounted to W 7.8 billion (W 2.6 billion recurrent) in 1976; the planned total for 1977 is W 11.2 billion (W 3.5 billion recurrent) (Annex 6). The first figure compares to a total Ministry of Education budget of W 207 billion (1975), and the figure in parentheses to W 10.4 billion recurrent expenditure for the country's 30 private vocational high schools (1975) 1/. These comparisons illustrate, respectively, the small size of the present VTI system and its high quality standards.

3.22 The VTIs are financed entirely from the Central Government budget. Trainees do not pay any fees for courses, lodging, and school uniforms and may receive a subsidized loan to cover the expenses for school meals. This fee

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1/ The relevant figure for the public segment is not available.

exemption is in keeping with the equity orientation of the VTIs. The Government has set up the VTIs with the explicit purpose of providing an educational alternative for deserving pupils from low-income families, mostly from rural areas, who for financial reasons, cannot continue their education. For the same reason, it provides board for all trainees - a policy which the Bank has supported in the Third Education Project through the inclusion of 50% of the VTI boarding facilities.

3.23 Although the Basic Law for Vocational Training provides in principle for the possibility of charging fees 1/, the Government presently does not appear to plan the implementation of this clause. However, one article in the Law constitutes a significant substitute for a financial contribution, namely, an obligation by the trainee to work in the enterprise assigned to him on graduation for a period at least twice the length of his training (i.e., two years for regular trainees). The stabilizing influence of this clause on the labor market could be considerable.

Government Plans for Vocational Training

3.24 The Government plans to establish 8 more VTIs with 450 places each in 1978/79. With this addition, the OLA system would comprise 24 VTIs and the CVTI. This would be an average of two to three VTIs per province (with the exception of the largely agricultural island of Cheju), i.e., a geographic coverage that would obviate the need to transfer large numbers of trainees among provinces and would permit continuous contacts with the majority of industrial establishments (given that all VTIs will be located in, or close to, urban agglomerations or industrial estates).

3.25 During the period of the Fourth Plan, the Government also intends to anchor the VTIs more firmly in their regional economies, by converting them into vocational training corporations with the status of Juridical Bodies (Appendix III). This would mean that local industry, through their representatives on the Board of Directors, would become involved in the planning and implementation of VTI programs - although OLA would retain the right of ultimate control in matters of financing, personnel, training content, and examinations. It would furthermore enable the VTIs to tap additional sources of revenue, e.g., through consulting services to industry, commissioned training, and sale of products and would result in a greater flexibility on expenditures, particularly for staff remuneration. Although it may take time for a newly established VTI fully to exploit the scope of budgetary autonomy offered by this change in its legal status, the active involvement of industry in VTI administration and the increased budgetary flexibility should ultimately lead to a strengthening of the VTI system.

3.26 Another important development in vocational training will be the transfer of an increasing share of the training responsibilities to the private sector (see Appendix III). Under the Basic Law for Vocational Training, which has been passed in December, 1976, the Government will enforce a training obligation that has already been in existence for two years. Firms with

1/ However, the flexibility of the Law in financial matters is apparent in another provision that allows for the payment of allowances to trainees (this presumably with the case of the CVTI students in mind).

more than 200 employees will be expected to provide vocational training for up to 10% of their work force each year. This obligation could either be met directly, i.e., by establishing an in-plant training scheme (which the Law would support through a variety of incentives) or by paying a training levy based on the average training costs of the trades represented in the enterprise. The setting of annual global, sectoral, and occupational targets by OLA would permit a timely response to changing labor market conditions.

IV. THE PROJECT

4.01 The proposed project would constitute the second phase of the Bank's support for Korea's vocational training system, which started with the OLA sub-project financed under Loan 1096-KO (Third Education Project) of 1975 (para 1.03). With the proposed project, the network of VTIs would attain a size and spatial distribution that would make large-scale interprovincial transfers of trainees unnecessary and that would permit close continuous contacts with most of Korea's major industries (para 3.24).

4.02 The proposed project would pursue the following main objectives:

(i) Contribute to the supply of technical manpower at skilled and semi-skilled workers levels needed for the country's industrial development (para 2.06, 2.07, 3.09),

(ii) Provide out-of-school youth with a means to acquire skills that would make them employable in industry (para 3.22),

(iii) Strengthen vocational instructor training, and

(iv) Give technical assistance to the country's efforts in the field of in-plant vocational training.

4.03 The project items (with their locations shown on the map at the end of the report) would be as follows:

Item	Number of Places				Additional Output
	Existing /a	New	Total	Increase (%)	Per Annum
Eight VTIs /c	6,900	3,600	10,500	53	5,400 /b
Central Vocational Training Institute (CVTI)	660	90	750	14	50
Technical Assistance					

/a 16 VTIs now operating or being established.
/b Assuming 1-1/2 shift operation (regular courses only).
/c Numbers rounded to nearest 100.

4.04 During negotiations, the Government agreed to establish a performance-monitoring system in all the project institutions that would collect information on skill attainment and employment status of graduates. This data collection would parallel the project-monitoring efforts for the Vocational Training Institutes provided under the Third Education Project. The information would be used to (a) ascertain whether the project objectives are being attained and (b) identify weaknesses in the structure or operation of the project institutions that would need correction.

The Project Components

Eight Vocational Training Institutes (Proposed Outlay: US$38.8 million)

4.05 Korea's long-term process of industrialization and structural change will continue to require large numbers of skilled and semi-skilled workers (see paras 2.06 - 2.10). The Vocational Training Institutes constitute a flexible and efficient mode of industrial skill acquisition. In addition to the seven VTIs with 2,520 places provided under the Third Education Project, the proposed project would assist in the construction, furnishing, and equipping of eight additional VTIs with 450 places each. The project would include - as does the VTI component of the third project - boarding facilities for about 50% of the trainees (see para 3.22).

4.06 Each VTI would teach five trades that would reflect the local industrial structure and labor market conditions. The proposed project would comprise facilities for 8 trades (the number of VTIs with the respective trade are in parentheses): turning (8), machine fitting (8), welding (8), electrical fitting (8), plumbing (3), sheet metal work (2), pipe fitting (2), and milling (1). Since the VTIs would be used in 1-1/2 shifts, the aggregate annual output from the 8 VTIs would be about 5,400. In addition, the institutes could organize, on request, shorter courses for upgrading and retraining of industrial workers, depending on demand and available capacity.

4.07 The locations tentatively selected by the Government for the new VTIs are Naju, Nonsan, Sasang, Weonju, Chungmu (Geoje), Hongseong, Kimcheon, and Pyeongtaek (Banweol); the first four are planned to be constructed in 1978. The proposed VTIs would be near areas of high industrial concentration or close to existing or planned national or provincial industrial estates. The locations have been reviewed by the Bank and are acceptable.

4.08 The eight new VTIs would require about 400 additional instructors (see Annex 5B). The present deficit of VTI instructors and the continued loss of CVTI graduates could seriously impair the functioning of the VTI system in the near future (see paras 3.13 and 3.17). Although the provision of staff housing for all VTI staff is expected to alleviate this problem (para 3.15), it may not be sufficient to overcome it completely. The Government agreed at negotiations that it would establish not later than December 31, 1977 a plan acceptable to the Bank to eliminate present, and avoid possible future, shortages of VTI instructors and that it would implement such plan in accordance with a schedule acceptable to the Bank. The Government also agreed that it would finance from its own resources housing for the teaching staff of the eight VTIs.

Central Vocational Training Institute (Proposed Outlay: US$1.4 million)

4.09 The proposed investment in the Central Vocational Training Institute would, besides improving the general quality of instructor training, permit an expansion of enrollments in the regular two-year course from about 660 to 750 and of the annual output from about 320 to 370 instructors (a 16% increase). During negotiations, the Government informed the Bank that it plans a temporary enrollment increase to 850 as part of its measures to ensure an adequate supply of VTI instructors. Bank assistance would consist of financing equipment in the fields of precision measurement, metal finishing, electrical fitting, machining, sheet metal work, and welding. This would constitute a direct support of the VTIs to be established under the Third Education Project and the proposed vocational training project.

4.10 The current deficit of instructor-trainers has even more serious implications than the shortage of VTI instructors (para 3.14). The plan for meeting expected instructor shortages (para 4.08) would also include measures to compensate for the present deficit and possible future shortages of instructor-trainers.

Technical Assistance (Proposed Outlay: US$1.9 million)

4.11 A total of about 24 man-years of specialist services and of 22 man-years of fellowships would be needed to support the other project components and to provide specific expertise needed for the large-scale introduction of in-plant vocational training (see Appendix IV). The technical assistance would be required within the vocational training system as follows:

Item	Amount of Assistance
VTB	6 man-years of specialist services
CVTI	10-1/4 man-years of specialist services and 2 man-years of fellowships
VTIs	8 man-years of specialist services and 20 man-years of fellowships

4.12 The Government expects technical assistance for the VTB to be financed from the proposed loan; for the CVTI from UNDP funds; and for the VTIs through bilateral assistance from the Federal Republic of Germany. The UNDP technical assistance agreement has already been concluded and the request for bilateral assistance has been assured priority consideration. The proposed loan would only cover 6 man-years of specialist services for the VTB.

V. PROJECT COST, FINANCING, AND IMPLEMENTATION

Cost Estimates

5.01 Total estimated project costs, including staff housing and all technical assistance, are summarized below; details are given in Annex 7.

Project Items	Won (million)			US$ (thousand)		
	Local	Foreign	Total	Local	Foreign	Total
Vocational Training Institutes (8)	9,305	9,500	18,805	19,185	19,585	38,770
Central Vocational Training Institute (1)	80	600	680	160	1,240	1,400
Technical Assistance	185	755	940	385	1,555	1,940
Total Base Cost	9,570	10,855	20,425	19,730	22,380	42,110
Physical Contingencies	915	750	1,665	1,880	1,550	3,430
Price Contingencies	2,700	2,490	5,120	5,560	5,140	10,700
Total Contingencies	3,615	3,240	6,855	7,440	6,690	14,130
Total Project Cost	13,185	14,095	27,280	27,170	29,070	56,240

5.02 Construction cost estimates are based on the recent cost of similar institutions in Korea and refer to April 1977 prices. The average building cost per square meter of about US$145 is reasonable and compares well with construction costs in other East Asian countries (e.g., Malaysia, about US$142). The estimated unit capital costs per place of about US$7,000 exceed the unit capital costs for the VTIs under the Third Education Project as estimated during appraisal (US$5,500) by about 25%. This difference is attributable to price increases in the 2-1/2 years time interval between the two estimates (more than 20%) and to the inclusion of spare parts and safety equipment in the proposed project.

5.03 Use factors for classrooms, workshops, and laboratories of the project institutions are economical at about 80%, based on a 44-hour week. Estimates of equipment cost are based on equipment lists for the VTIs in the Third Education Project, prepared by the Korean authorities and revised during appraisal. Technical assistance cost was estimated on the basis of US$50,000 per man-year for expert services. About 10% of total project base cost would be allocated for boarding facilities. Standard plans prepared for the VTIs in the Third Education Project, already approved by the Bank, would be used to expedite implementation and to control costs.

5.04 Physical contingencies for unforeseen factors amount to 10% for site development, construction, furniture, and professional services and 7.5% for equipment (Annex 8). A price contingency of US$10.7 million has been included, assuming the following annual rates of price escalation:

Item	Annual Percentages 1977	1978	1979	1980
Civil works	9	9	9	8
Equipment and furniture	7.5	7.5	7.5	7

5.05 Based on a detailed analysis during appraisal, the foreign exchange component has been estimated as follows: (a) site development, 15%; (b) construction and furniture, 25%; (c) equipment, 90%; (d) professional services, 10%; and (e) specialist services, 80%. These percentages have been derived (a) by disaggregating civil works and furniture costs into material, labor overhead, and profit components and (b) by analyzing the equipment awards made under Credit 151-KO and Loan 906-KO/Credit 394-KO. Including contingencies, the foreign exchange component is estimated at US$29.1 million, or about 52% of total project cost.

Financial Plan

5.06 The proposed Bank Loan would finance 79% of the foreign exchange component, or 41% of the total costs including contingencies. The balance would be met by the Government (55%) and the UNDP and the Federal Republic of Germany (4%). The Government has informed the Bank that sufficient counterpart funds would be made available in 1977 and 1978 for the proposed project and for the MOE component of the Third Education Project; sufficient funds have already been made available for the OLA component (para 1.03).

5.07 The incremental recurrent expenditure generated by this project would amount to about Won 2.1 billion per annum in 1976 prices, slightly over 30% of the total estimated recurrent VTB budget for 1980. The additional expenditures would not cause budgetary difficulties because the Government assigns high priority to the development of its vocational training system, of which the proposed project is an integral part.

Project Implementation

5.08 The project unit established in the Office of Labor Affairs for the implementation of the OLA component of the Third Education Project would be responsible for administration, financial control, and liaison with the Bank. However, it needed to be strengthened to carry out the additional work on the proposed Vocational Training Project. The Government has informed the Bank that the project unit has been increased by three additional full-time staff in accordance with the Bank's proposals.

5.09 Civil works would follow the space standards and equipment lists established for the VTIs in the Third Education Project. Sketch plans for major civil works and major components of lists of furniture and equipment would be reviewed by the Bank before procurement.

Administration

5.10 The imminent growth of the VTI system and the new administrative and technical tasks of the Vocational Training Bureau, due to the large-scale introduction of in-plant vocational training, make expansion and strengthening of the VTB mandatory (para 3.19). The OLA has prepared a staff expansion program which is being reviewed by all relevant Government agencies. At negotiations, the Government has agreed to establish such staff expansion program, acceptable to the Bank, not later than October 31, 1977, and to make it effective not later than December 31, 1977. It has also agreed thereafter to exchange views with the Bank with regard to any proposed future staff increases required by the VTB.

Sites

5.11 Four out of eight sites for the new VTIs had been tentatively selected at appraisal time. The Government has agreed at negotiations that it would acquire sites at least three months before the planned start of construction.

Professional Services

5.12 Design and supervision of civil works would be the responsibility of consultant firms that are acceptable to the Bank and selected and commissioned by OLA on terms and conditions satisfactory to the Bank. The services of qualified consultant firms are available in Korea.

Procurement

5.13 The project unit should work closely with the Office of Supply, Republic of Korea (OSROK) for the procurement of civil works, furniture, and equipment. Contracts for civil works and furniture would be awarded on the basis of competitive bidding following domestic advertising and local procedures satisfactory to the Bank. Foreign contractors would be allowed to participate, but, judging by the experience of the previous education projects, are unlikely to do so. Korea's construction industry is large and efficient, and all civil works in the First, Second, and Third Education Projects have been awarded to local contractors, even though foreign firms were allowed to submit bids. Prior Bank approval would be required for all civil works contracts of US$250,000 equivalent or more.

5.14 Equipment contracts of US$100,000 equivalent or more would be awarded on the basis of international competitive bidding in accordance with the Bank's guidelines. In bid comparison, domestic manufacturers would be allowed a preferential margin of 15% or the existing customs duty, whichever is the lower, over the c.i.f. price of competing imports. Equipment purchases that cannot reasonably be grouped to form contracts for at least US$100,000 equivalent

and aggregating to not more than US$3.5 million equivalent could be awarded without prior Bank approval on the basis of competitive bidding advertised locally following Government procedures satisfactory to the Bank. In addition, off-the-shelf items, not exceeding US$10,000 in each contract and aggregating to not more than US$500,000 equivalent could be purchased on the basis of a minimum of three quotations.

Disbursement

5.15 The proposed loan of US$23.0 million would finance 41% of total project costs. It would be disbursed in accordance with Schedule I of the Loan Agreement to meet

(i) 100% of the c.i.f. costs of directly imported equipment;

(ii) 100% of the ex-factory price of locally manufactured equipment;

(iii) 70% of the cost of the imported and locally procured equipment;

(iv) 25% of the expenditure on civil works, professional services, and furniture, excluding that on staff housing; and

(v) 100% of the total cost of technical assistance, excluding the UNDP and bilaterally financed components.

The estimated disbursement schedule is shown in Annex 9. Withdrawal applications would be aggregated to the extent feasible in groups of at least US$50,000 prior to submission to the Bank for reimbursement out of the proceeds of the proposed loan. Disbursement is expected to be completed by December 31, 1981.

5.16 Implementation Period. The proposed project would be implemented in about four and a half years. Construction and equipment and furniture procurement should be completed in about three years (Annexes 10 and 11) because preparations for implementation are in an advanced stage and most standard designs are already available.

VI. BENEFITS AND JUSTIFICATION

6.01 The proposed project would contribute to industrial development in Korea, particularly to the expansion of heavy and chemical industries, through the provision of training facilities for skilled workers. By supporting a flexible and industry-oriented mode of training, it would have a built-in element of adaptability to changing labor market conditions.

6.02 More specifically, the proposed project would

(i) Increase the annual training capability for skilled and semi-skilled workers in the VTI system by 5,400 or 53%; this would amount to 6% of the relevant average annual training needs during the period of the Fourth Five-Year Plan (1977-81) and would create a situation of approximate balance between the supply and demand of skilled workers (craftsmen);

(ii) Expand and improve the Central Vocational Training Institute to provide an adequate supply of properly trained instructors to support the growth of the VTI system; and

(iii) Provide, under the Bank-financed technical assistance component and in conjunction with the UNDP and bilateral technical assistance, expertise relevant for establishing a large-scale in-plant vocational training network (e.g., in-plant training management, job analysis).

6.03 Since the VTI system constitutes an alternative means of industrial skill acquisition (and subsequent employment) for deserving middle-school graduates from low-income families, the proposed project would also support the Government's aim of promoting social equity. This objective is pursued through the provision of boarding places mostly for rural trainees, amounting to 50% of total enrollments.

6.04 The realization of these benefits depends on the fulfillment of two important conditions, namely:

(i) A sufficient and timely supply of VTI instructors and, a fortiori, trainers for the future instructors; and

(ii) The development of an adequate and appropriate administrative and technical infrastructure in OLA to cope with both the expansion of the VTI system and new tasks deriving from the introduction of in-plant vocational training and related changes in the administration, funding, and supervision of vocational training in the private sector.

The Government has agreed that it would take steps to ensure that these conditions are being met (paras 4.08, 4.10 and 5.10).

6.05 The extension of the tracer system to be established for the VTIs financed under the Third Education Project to the institutions included in the proposed Vocational Training Project would ensure a regular feedback of information on project performance and would permit an early recognition and correction of weaknesses in project design or operation.

VII. RECOMMENDATIONS

7.01 At negotiations, the Government agreed to

(i) Establish a performance-monitoring system in the project institutions (para 4.04);

(ii) Finance from its own resources houses for the teaching staff in all 8 VTIs (para 4.08);

(iii) establish and implement a plan to eliminate present, and avoid possible future, shortages of VTI instructors and CVTI instructor-trainers (paras 4.08 and 4.10);

(iv) establish and implement a staff expansion program for VTB/OLA (para 5.10); and

(v) Acquire sites for the VTIs at least three months before the planned start of construction (para 5.11).

7.02 The proposed project constitutes a suitable basis for a Bank loan to the Government of Korea of US$23.0 million equivalent, with a term of 17 years including a grace period of 3-1/2 years.

SUMMARY OF PREVIOUS WORLD BANK GROUP EDUCATION PROJECTS IN KOREA

The First Education Project has been completed and the Second and Third Education Projects are currently being executed. They can be summarized as follows:

Education Project I (Credit 151-KO)

1. The First Education Project in Korea was signed in 1969 under Credit 151-KO with an estimated total project cost of US$26.8 million, of which US$14.8 million was financed by the Credit. The principal objective of the project was the improvement of selected existing schools to enable them to produce well-trained people suited to the needs of Korea's growing commerce and industry, as well as some limited expansion in enrollment and output in key fields.

2. The project provided urgently needed facilities to assist teaching agricultural, commercial, scientific and industrial subjects at 32 senior secondary and post-secondary schools, 1 university agricultural education department, and 3 university science-teacher training departments. Consultant architectural services to carry out the school construction program and a team of specialists to assist in developing agricultural and technical education were also provided for in the project.

3. The project was completed in 1976. Completion was nearly two years behind the original estimate principally due to the late arrival of consultants and the inexperience of the project unit in equipment procurement at the initial stage of implementation. All civil works were completed before the original Closing Date, but equipment procurement was completed about two years later. Total project cost was US$26.3 million, about 2% below the original estimate, mainly due to the devaluation of the Won. Disbursement reached US$14.7 million, or 99% of the Credit. Student enrollments in project schools and departments totaling 27,800 at the time of appraisal, reached 38,400 on completion of the project in 1976, about 7% more than the originally projected figure. The actual output became correspondingly higher. The quality of training was significantly improved in project institutions. The project completion mission concluded that the first education project has met or exceeded its important objectives in both physical and educational terms.

Education Project II (Loan 906-KO/Credit 394-KO)

1. Project Description

Total Project Cost (appraisal estimate)	US$70.2 million
Amount of Credit/Loan	US$23.0/US$20.0 million
Amount Disbursed (6/8/77)	US$13.2 million
Date of Credit/Loan Agreement	6/13/73
Closing Date	12/31/77

2. Project Content

Equipment for (a) 14 agricultural high schools, (b) 18 technical high schools, (c) 10 junior colleges, (d) 10 universities, (e) 1 College of Merchant Marine, (f) 10 junior teacher colleges, (g) 12 colleges of education, and (h) technical assistance for staff development in universities and feasibility studies on management and health education.

3. Project implementation is about 12 months behind schedule mainly because of initial delays in equipment procurement. However, all equipment lists totaling about US$35 million have been approved; contracts of about US$18 million have been awarded; the remaining equipment is being tendered. Progress on related civil works (not financed by Bank Group funds) is satisfactory. The estimated total project cost would be about US$76 million, or 8% higher than the original estimate. Disbursements reached US$13.2 million in early June 1977, a significant improvement since the end of 1976 (US$8.1 million). The Closing Date (December 31, 1977) is expected to require extension by about one year because of initial delays.

Education Project III (Loan 1096-KO)

1. Project Description

Total Project Cost	US$39.1 million
Amount of Loan	US$22.5 million
Amount Disbursed (6/8/77)	US$1.3 million
Date of Loan Agreement	3/3/75
Closing Date	6/30/80

2. Project Content

(i) Ministry of Education

Equipment and expansion of buildings for (a) one mechanical technical school; (b) three agricultural junior colleges; (c) one fisheries college and three fisheries high schools; (d) one marine junior college; and (e) engineering and technical services for the preparation of future education projects.

(ii) Office of Labor Affairs

Equipment and buildings for seven new Vocational Training Institutes.

3. (i) Ministry of Education Project Component

Generally, implementation is on schedule. Progress on civil works is slightly behind the original estimate because of temporary shortages of local funds. Progress on equipment procurement is satisfactory and ahead of schedule. This is mainly due to the experience gained by the local staff through the implementation of the two previous education projects.

(ii) Office of Labor Affairs Project Component

Implementation is about six months behind schedule due to changes in course structure in the project institutions and relocation of one VTI. Technical assistance arrangements have been made and all experts have arrived.

THE PRESENT AND PLANNED STRUCTURE OF THE VOCATIONAL TRAINING BUREAU (VTB)

1. The Vocational Training Bureau (VTB) is one of seven bureaus constituting the Office of Labor Affairs (OLA), which in turn forms part of the Ministry of Health and Social Affairs. Although OLA is not the only Government agency with vocational training responsibilities, its occupational coverage is by far the broadest: Of a total of 543 occupational qualification titles at skilled and semi-skilled workers levels, only 12 do not come under its purview.

2. The VTB directly manages the CVTI and the national VTIs. It indirectly controls the other public vocational training institutions, the in-plant training centers, and accredited private vocational training institutions, by virtue of its responsibility for developing learning materials and supervising skill testing.

3. This considerable administrative and technical workload is carried by a comparatively small staff: 15 to 20 professionals together with about twice that number of support staff. They are grouped in three sections viz: the Vocational Training Section, the Skill Test Section, and the Technical Cooperation Section (see Chart 1) each of which has two subsections.

4. The Vocational Training Section (with the subsections Training Programs and Training Guidance) is responsible for (a) the registration of all vocational training institutions, (b) the supervision of their programs, and (c) technical guidance.

5. The Skill Test Section (with the subsections Skill Testing and Manpower Management) evaluates occupational qualifications and establishes skill standards. It also organizes, in cooperation with the Ministry of Science and Technology and the Korean Institute for Science and Technology all skill testing that comes under the jurisdiction of OLA.

6. The Technical Cooperation Section (with the subsections International Cooperation and Loans) handles all matters pertaining to foreign capital and technical assistance. Its present prominence derives from the fact that virtually all existing or planned national VTIs and the CVTI involve bilateral or multilateral assistance. This section is thus in effect the physical implementation agent of the VTB.

7. Although the administrative and technical capabilities of the VTB are already strained, the increase of the national VTI system over the next years and the new tasks deriving from the implementation of the Basic Law for Vocational Training (such as development of annual aggregate training plans, annual review and approval of individual in-plant training plans, and determination of allocated shares of the vocational training fund) would appear to burden the VTB with an unmanageable workload; hence the need for its expansion and strengthening.

8. OLA has prepared a proposal for the strengthening of the VTB that takes into account the enlargement of existing, and the addition of new administrative and technical functions. This proposal foresees the expansion and partial reorientation of the three existing sections and the creation of two new ones (see Chart 2).

9. The present Vocational Training Section, renamed the Planning Section, would consist of four subsections: Planning, Standards, Provision, and Equipment. The first would estimate training needs and derive projections of physical and budgetary requirements. The second would develop facilities and equipment standards and curricula. The third would undertake facilities planning and implementation and the fourth would prepare equipment specifications and be responsible for the procurement of local equipment.

10. The present Skill-Testing Section would be enlarged to comprise three subsections: Skilled Manpower Management, Skill Test I, and Skill Test II. The first subsection would carry out development and planning work in the field of skill testing, the other two would supervise the actual testing process; their division of labor would be along occupational lines.

11. The Technical Cooperation Section would continue its present work; its three subsections would be Foreign Capital Management, International Cooperation, and Overseas Training. The first would be in charge of implementing the IBRD and ADB projects; the second would be responsible for bilateral, UNDP, and technical assistance projects; and the third for fellowships.

12. Of the two proposed new sections, the Guidance Section would consist of the Public Vocational Training, In-Plant Vocational Training, and Vocational Instructor Training subsections. The first would supervise the national VTIs; the functions of the other two subsections are evident from their names.

13. The second new section, the Technical Section, would have three subsections: Textbook Compilation, Training Criteria, and Technical Guidance. Their responsibility would encompass the public training, in-planting training, and accredited training segments, respectively, of the vocational education system.

14. The OLA proposals imply an addition of 28 regular staff (two of whom would be senior personnel - section chiefs) and including 6 technical specialists for the major trade clusters. This should enable OLA better to cope with the expansion and diversification of their responsibilities.

15. To facilitate the multiple contacts with business enterprises all over the country, OLA is also planning to establish Vocational Training Sections (with a Vocational Training and a Skill Test sub-section) in each of its 15 major field offices, and a Vocational Training subsection (as part of the Employment Security section) in each of its 19 minor field offices. In addition to redeploying part of OLA's field staff, this would imply the creation of 110 new positions.

AN ABSTRACT OF RECENT VOCATIONAL TRAINING LEGISLATION

1. The Basic Law for Vocational Training 1/ (BLVT) has the following aims:

(i) To streamline and consolidate in one law the existing vocational training legislation and to adjust the provisions of the previous legislation to present labor market conditions;

(ii) To simplify the existing structure of vocational training and to give greater flexibility to the operation of the National Vocational Training Institutes by reorganizing them into individual corporations under public law; and

(iii) To establish a cost-sharing fund for vocational training that would permit the business enterprises with vocational training obligations under the BLVT to chose between three possibilities - (a) to conduct their own in-plant vocational training, (b) to delegate this training to another vocational training institution, or (c) to contribute an allotted share to the fund.

2. The various organizational forms of vocational training will be grouped in three broad categories:

(i) "Public vocational training" carried out by the Central Government (OLA or other Ministries or Government agencies), Provincial or Local Governments, or vocational training corporations established in accordance with the BLVT;

(ii) "In-service vocational training" (in-plant training) undertaken by individual business enterprises or groups of enterprises; and

(iii) "Accredited vocational training," to be approved in each individual case by the Director General of OLA and given by nonprofit corporations other than the corporations referred to in para 1(ii) above.

3. Public vocational training institutions, in addition to performing their direct vocational training tasks, will also give technical assistance

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1/ This summary is based on an unofficial translation of the draft Law, which was passed in December 1976.

to in-service vocational training and accredited vocational training institutions located in the same geographic area.

4. The Government intends to give all national VTIs (whether operational, under construction, or in the planning stage) the status of vocational training corporations, i.e., of juridical persons. They will be supervised by a board of directors consisting of between 9 and 15 directors and 1 or 2 auditors. They would be determined in accordance with the articles of incorporations for the individual VTI. Some of the directors would be board members ex officio, e.g., the Provincial Governor, the Director of the Provincial Board of Education, the mayor of the city where the VTI is located, the Director of the local OLA office, the Chairman of the local Chamber of Commerce and Industry, and a representative from a university in the province. Others would be selected from representatives of the main local industries, the directors of relevant economic federations or associations, and the chiefs of related research institutes. The auditor(s) would be appointed by OLA.

5. Although the BLVT does not specify the responsibilities of the board, one example of Articles of Incorporation enumerates the following functions:

(i) Modification of Articles of Incorporation;

(ii) Settlement of accounts;

(iii) Development of vocational training places;

(iv) Staff appointments, including that of the VTI director; and

(v) Acquisition and sale of property.

6. OLA would however continue to have a decisive influence on the activities of the VTI because it would have to approve the annual training plans, budgets, and audits.

7. The BLVT gives the VTIs a greater measure of budgetary independence than they have now, in particular the possibility of creating revenues through the following activities 1/:

1/ OLA expects that the bulk of the VTI budgets (80%) will continue to be provided by the Central Government.

(i) Technical services to industry,

(ii) Production for sale,

(iii) Commissioned training,

(iv) Collection of skill test fees, or

(v) Other revenue projects.

The proceeds from these activities could be used to improve the quality of vocational training in the VTI or its health and welfare services.

8. The BLVT confirms and specifies the vocational training obligations for business enterprises with 200 or more employees established under the previous legislation. The annual training targets are determined by the Director General of OLA. They may vary by industry and occupational category but in the aggregate are not to exceed 10% of a firm's number of full-time employees. All economic sectors, except agriculture, forestry, and fisheries, are subject to these provisions, but specific exceptions can be established through Presidential Decree.

9. If a firm chooses to meet its training obligations directly [see para 1(iii) above], it has to submit for OLA's approval annual vocational training plans that have to meet certain standards previously established by OLA.

10. If the firm prefers to delegate the vocational training, it has to submit an application to OLA, which chooses a suitable training institution and may not without good reason, decline this referral. The firm will reimburse, through the Cost-Sharing Fund for vocational training (see para 11 below), the institution for the expenses incurred.

11. If the firm does not want to take one of the two preceding options, or if its annual vocational training plan is not approved by OLA, it has to pay an allotted share into the Cost-Sharing Fund for vocational training. The size of this contribution is based on actual training costs in the relevant industry and for the occupations represented in the firm. Payment of this share entitles the firm to preferential treatment in the distribution of graduates from public vocational training institutions.

12. The operation of the fund is determined by the Basic Law for Vocational Training--Cost-Sharing Fund 1/. The fund will be fed from the following sources:

1/ See footnote to para 1 above.

(i) Allocated shares paid by the firms,

(ii) Government subsidies, and

(iii) Income created through the management of the fund.

13. The fund can be used to meet the following expenditures:

(i) Delegated training (para 10 above);

(ii) Vocational training grants for public vocational training, in-plant training, or accredited vocational training; and

(iii) Expenditures for activities related to vocational training or other expenditures deemed necessary for the development of vocational training, as determined by Presidential Decree.

14. OLA will prepare an annual fund management plan, in consultation with the Economic Planning Board and the Ministry of Finance. The Director General of OLA will appoint an official under his jurisdiction as controller and other OLA officials as fund receipts and disbursement staff who will implement this plan.

Functional Breakdown of Proposed Technical Assistance

(Sub-Totals and Totals Underlined)

		Sector of Assignment	Number	Specialty	Duration (m/m)	Expected Source of Finance
A.	Experts	CVTI	8		122	UNDP
			1	Job Analysis	12	
			1	MST 1/ (metal trades)	12	
			1	MST (electrical trades)	12	
			1	Training Aids	6	
			1	PM 2/ (physical dimensions)	6	
			1	PM (electricity/electronics)	6	
			1	Heat Treatment and Metal Finishing	12	
			1	Instructor Training Methods/ Industrial Electronics/ Chief Advisor 3/	56	
		VTIs 4/	4		96	FR Germany
			1	Machine Fitting 3/5/	24	
			1	Electrical Fitting 3/	24	
			1	Turning/Milling/Mach.Fitting 3/	24	
			1	Plumbing/Welding/ Sheet Metal Work/Pipe Fitting 3/	24	
		VTB/IPT 6/	6		72	Bank
			1	IPT Management	12	
			1	MST (electrical fitting)	12	
			1	MST (machine fitting	12	
			1	MST (welding/sheet metal work)	12	
			1	MST (pipe fitting/plumbing)	12	
			1	MST (machining)	12	
	Total Experts		18		290	
B.	Fellowships	CVTI	5		24	UNDP
			1	Industrial Electricity	6	
			1	PM (physical dimensions)	3	
			1	PM (electricity/electronics)	3	
			2	Heat Treatment and Metal Finishing	12	
		VTI	20	Senior VTI Staff	240	FR Germany
	Total Fellowships		25		264	

1/ MST= Modular Skill Training
2/ PM = Precision Measurement
3/ already in position
4/ in Third Education Project and in proposed project
5/ also Chief Advisor and specialist for training levies - may advise VTB on part-time basis
6/ IPT= In-plant training

COMPARATIVE EDUCATION INDICATORS

(MAY 6,1977)

	YR	POP, MILLS,	GNP/ CAPITA AT MARKET PRICES (US$)	% GNP DEVOTED TO EDU, (PUBLIC EXP, ONLY)	% TOTAL PUBLIC EXP, DEVOTED TO EDU,	% OF PUBLIC EDUCATION RECURRENT EXP ALLOCATED TO PRI,	SEC,	HI,	LITERACY RATE (% OF ADULTS)	PRI, ENROLL. RATIO NET (%)	COMPLETION RATE FOR PRI,SCH, CYCLE(%)	PRI, STU= DENTS PER TEACHER	AV,PRI, SCH,TEACH SALARY IN RELATION TO GNP/ CAPITA	PROGRESS= ION RATE FROM PRI, TO SEC, (%)	SEC, ENROLL. RATIO NET (%)	SEC STU= DENTS PER TEACHER	HIGHER ENROLL. RATIO (%)
		(1)	(2)	(3)	(4)	(5)			(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
ADVANCED																	
AUSTRIA	73	7,5E	4,410E	4,3	9,9	47Q	25Q	20Q	99	98	93	26	2,0	99	51	19	8,00
CANADA	72	22,5E	6,190E	7,7	19,4	30	38	19	98	89	98	24	2,0	99	82	17	9,00
GERMANY F,REP,	72	62,0E	6,260E	4,2	14,2	...	74**	26	99	91	99	33	...	99	91	22	17,00CY
JAPAN	71	109,7E	4,070E	4,3	20,7	39	38	12	99	99D	99C	25C	2,0	99C	94D	20C	28,00D
NETHERLANDS	72	13,5E	5,250E	8,5	19,1G	32	45	19	99	95	95	29	3,0	97	73	20	11,00
NEW ZEALAND	73	3,0E	4,310E	5,2	...	39	24	29	99	99	99	26	...	99	67	19	24,00
NORWAY	72	4,0E	5,860E	7,0	15,2	58	23	13	99	99	98	20	1,9	99	76	14	11,00
SWEDEN	73	8,2E	7,240E	8,9	16,0	36	14	13	99	99	99	17	...	90	85	10	30,00
U,K,	72	55,9E	3,390E	6,3	12,7	26	39	22	98	99	...	26	2,0	...	63	17	11,00
U,S,A,	72	211,9E	6,670E	6,0	15,4	...	73**	27	99	99	99	25U	2,0	...	93	19U	29,00
EUROPE																	
GREECE		9,0E	2,090E	2,2	11,1	54Y	29Y	14Y	82A	95Y	...	32Y	...	70A	58Y	43Y	11,00
IRELAND	72	3,1E	2,320E	5,1	13,9D	43Y	41Y	14Y	98	97	99A	35	...	95A	75	19	7,00A
PORTUGAL	72	9,0E	1,630E	...	...	...	...	...	...	91XY	...	...	...	...	65XY	...	7,60Y
SPAIN	71	35,1E	2,490E	2,4B	15,2A	49Y	22Y	15Y	94A	91A	...	35A	...	...	29A	30	6,00A
AFRICA																	
ALGERIA	75	15,7	778	7,5	...	41G	32G	18G	30	76	62E	42E	6,0G	49E	17	25	4,00
BENIN	73	3,0E	120E	5,3	32,0	47	23	10	11	32XB	70B	50B	25,0B	45B	7B	59B	0,44CY
BOTSWANA	74	0,7	290	5,0	20,0	38	20	15	25	70X	75	35	5,0	24	13X	18	0,30Y
BURUNDI	74	3,6	90	2,5	19,9G	47R	41R	12R	10	20X	30?	38	10,0	14	2X	18	1,0
CAMEROON	73	7,1E	250E	5,9	20,0	38Y	29Y	17Y	...	74	..	51DY	...	...	9	23CY	0,90CY
C,A,R,	70	1,7E	210E	4,0N	20,0	56	19	...	...	64CY	25	65CY	...	18	5CY	27BY	0,07Y
CHAD	75	4,0E	100E	3,0	10,0	78	22	"	15	29XBY	30	65BY	15,0	8	2XBY	30	0,018Y
CONGO(B)	74	1,3	470	6,0	19,3	40	32	21	50?	133X	63	63	6,0	48	33X	22	3,40
EGYPT	74	36,4	280	5,3	...	29	36	24	40	74X	45	40	...	64	39X	28	11,00
ETHIOPIA	73	27,2E	100E	3,1	20,0	42	29	18	7	17C	42	50	3,0	63	2	30	0,20
GABON	73	0,5	1,960E	5,0	20,6	25	9	11	...	184XBY	25C	46C	5,0	18A	20C	21C	1,40CY
GHANA	71	9,6E	430E	4,7	24,4DR	38Q	15Q	23Q	...	56XCY	62	30CY	...	14	11X	16CY	0,74BY
IVORY COAST	72	6,4E	460E	6,3	24,7	27BY	33BY	13Y	9A	52	57A	46	...	...	10	25	1,20BY
KENYA	73	12,9E	200E	6,4N	27,0	63	11	11	40	73	...	40	8,0	14	12	23	1,03BY
LESOTHO	75	1,2	140E	12,0P	23,0	49	18	20	40	85	50	52	7,0N	81	10	26	1,00
LIBERIA	75	1,5	410	2,4	13,2	27	15	20	75	58	...	35	2,0	...	18	26	1,18AY
MADAGASCAR	74	8,6	180	3,2	22,1	51	24	25	40	68X	30	63	15,0	48	9X	26	1,06
MALAWI	74	4,9	130	3,1	20,9	...	...	...	25	96X	60	50	7,0	40	4X	20	0,86CY
MALI	74	5,6E	80E	4,6N	32,3	34B	9BB	12B	10C	18A	22A	48A	14,0B	37A	4A	17A	0,16AY
MAURITANIA	70	1,3E	290E	4,5	21,0	...	...	...	10	15X	...	22	...	...	3	24	...
MAURITIUS	72	0,9E	980E	3,7	11,7DQ	71	10	4	80	86	99	31	...	...	31	30	1,47CY
MOROCCO	74	16,3	340	5,0C	16,5	44	47	9	26?	54X	21	37	...	31	13X	21	2,00
NIGERIA	71	73,0E	327F	3,2N	...	40A	24A	20A	...	39XCY	...	34CY	...	...	4	20CY	0,37CY
RWANDA	73	4,0E	80E	3,2C	28,0D	...	...	...	23	92	...	51	...	...	2	13	0,23CY
SENEGAL	71	4,9E	330E	4,0N	22,5DR	38A	42A	5A	10	38X	...	46	...	...	11X	25	1,71CY
SIERRA LEONE	73	2,9E	190E	3,4	23,4	31	36	30	15?	54X	45	32	4,0E	68	13X	21	0,53BY
SOMALIA	75	3,2	100	3,7Q	10,8Q	49Q	16Q	19Q	50?	34X	86	35	10,0	60	3	15	0,10
SUDAN	72	15,2E	230E	4,5	13,2	43	29	28	15	38	75	45	4,0	25	11	20	1,23Y
SWAZILAND	75	0,5	470	3,8	---	38	31	19	50	73	71	38	3,8	51	24	22	1,00
TANZANIA	74	14,4E	160E	5,1N	17,0	36	...	12	63	44X	...	38	...	49	7	2	21C	0,30
TUNISIA	73	5,5E	650E	6,3	23,4	37	43	18	55	72	81	41	6,0	31	14	21	3,00
UGANDA	70	11,2E	240E	5,2N	17,6CR	40Q	22Q	25Q	25A	48XCY	...	36	...	14A	4XCY	21	0,58BY
UPPER VOLTA	72	5,8E	90E	4,0	23,9	65	10	6	5	10	...	45	18,0	20	2	23	0,01BY
ZAIRE	73	24,1E	150E	5,2CN	21,3C	54C	17C	29C	15	63	38	44A	6,0	43	8	24	0,96BY
ZAMBIA	74	4,8	520	5,3	14,2	34	18	16	43	88	80	47	9,0	20	13	22	1,00
CENTRAL AMERICA AND THE CARIBBEAN																	
COSTA RICA	71	1,9E	840E	5,2	22,7	57	25	12	89	86CY	65	29	3,0	58	22CY	25	12,11CY
DOMINICAN REP,	72	4,6E	650E	3,0	13,9	42	24	22	51	80	17	54	3,0D	63	13,5	24	7,00
EL SALVADOR	75	3,8E	410E	3,6	23,8	61	5	22	60B	65C	...	39CY	...	39	13XC	21CY	4,35BY
GUATEMALA	73	5,3E	580E	1,9	16,0	55	23	14	47	64	26	35	3,0	69	8	25	4,09Y
HAITI	72	4,5E	170E	0,9	6,6D	61	11	8	20B	22	25?	45	5,0	50	3	23	1,00?
HONDURAS	72	2,8E	340E	3,9	26,5D	64	13	18	52	81X	18	37	6,0	75	14X	14	3,00
JAMAICA	72	2,0E	1,190E	6,5Y	19,7	33Y	22Y	7Y	86	106XY	...	52	...	...	32XY	19	4,79Y
MEXICO	70	57,9E	1,090E	2,6	9,3	54	24	12	76	71	31	46	3,0	63	19	23	6,32CY
NICARAGUA	74	2,0E	670E	2,5	14,2	61	13	13	57	65	21	37	2,0	93	17	24	7,00
TRINIDAD & T,	71	1,1E	1,700E	5,1	18,9	53	27	12	90	95X	87	35	4,0	15	49	25	2,56AY
SOUTH AMERICA																	
BOLIVIA	76	5,6	315F	5,0	17,5F	...	...	...	38	17B	29D	24	5F	...	48	18D	...
BRAZIL	75	107,0	1,010	5,0	12,4	42E	20E	37E	64A	86G	...	27CY	...	...	26G	15CY	4,00B
CHILE	72	10,4E	830E	4,6Y	10,6AY	36Y	14Y	36Y	...	111XDY	...	37BY	...	...	48XDY	...	...
COLOMBIA	70	23,1E	500E	4,0	10,9	35	18	20	73	67	20	36	4,0	90	17	14	4,00
ECUADOR	72	6,9E	480E	3,7	27,7C	45QY	42QY	10QY	69	72	...	38	...	...	18	14	4,97BY
GUYANA	74	0,8	500	5,8N	14,7Q	47	35	14	83A	92X	39	33	6,0	19	62X	24	1,00
PARAGUAY	74	2,5	510	1,8	11,0	55	13	22	81	82	26	30	1,9	65	17	12	5,00
PERU	71	14,9E	740E	4,5	24,1D	50	22	15	72	80	38	39DY	3,0	70	30	23DY	12,00
VENEZUELA	73	11,6E	1,960E	4,6	19,9	30Q	28Q	35Q	77A	81	...	33	2,4	...	33	...	12,63CY

COMPARATIVE EDUCATION INDICATORS (CONTD)

(MAY 6,1977)

		GNP/ CAPITA AT MARKET PRICES	% GNP DEVOTED TO EDU. (PUBLIC EXP. ONLY)	% TOTAL PUBLIC EDUCATION EXP. DEVOTED TO EDU.	% OF PUBLIC RECURRENT EXP ALLOCATED TO			LITERACY RATE (% OF ADULTS)	PRI. ENROLL RATIO NET	COMPLETION RATE FOR PRI.,SCH. CYCLE(%)	PRI. STU= DENTS PER TEACH= ER	AV. PRI. SCH. TEACH= SALARY IN RELATION TO GNP/ CAPITA	PROGRESS= ION RATE FROM PRI. TO SEC.	SEC. ENROLL RATIO NET	SEC STU= DENTS PER TEACH= ER	HIGHER ENROLL= RATIO (%)
	POP. MILLS. YR				PRI.	SEC.	HI.									
	(1)	(2)	(3)	(4)	(5)			(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
ASIA AND OCEANIA																
AFGHANISTAN	74 16.3	110	...	...	39P	23P	16P	10	26X	24	41	5.0	78	8X	21	1.00
BANGLADESH	73 76.2E	100E	1.2	20.2	...	...	...	23	56X	...	48	...	...	23X	28	...
CHINA(TAIWAN)	73 15.7E	810E	3.2	14.0	28	41	22	82	98C	94	40	14.0	84	61C	26	20.00C
INDIA	71 599.6E	140E	2.6VY	...	...	...	...	29	79X	...	43A	...	...	28X	20AY	4.00AY
INDONESIA	74 136P	220G	3.9F	11.0F	69	21	10	60B	79X	43	30	2.0G	52	19X	14	2.00
IRAN	73 133.1E	1,250E	3.3	12.6	50B	18B	12B	50	77	74A	32	5.0B	80A	24	32	4.32CY
IRAQ	72 10.8E	1,110E	6.7	16.3DR	...	...	...	26	61CY	...	22	...	...	26XCY	26	6.28CY
JORDAN	73 2.6E	430E	7.0	8.8	52	15	21	59	91X	76	38	5.0	84	50X	22	4.00
KOREA	75 35.3	530	2.9	16.0R	65	33	2	92D	104X	98	52	3.5	77	55X	38	7.8
LEBANON	72 3.1E	1,070E	3.5	18.0	39	40	10	68	86	65	19	2.0	63	26U	25	23.00
MALAYSIA	74 11.7	680	6.4	28.0	44	31	11	60C	96F	90	32	4.0D	83F	44F	27F	3.00F
OMAN	72 0.7E	1,660E	1.7N	3.8	96	*	*	20	24X	99	33	7.0	...	0.4X	9	...
PAKISTAN	75 69.0	130E	1.6	16.2	45	29	18	21	47X	50	39	2.0	...	17X	18	6.00
PAPUA N.G.	75 2.6	410	5.6	16.1	38	16	24	32	57?	73P	31	11.0	90	12X?	24	0.90?
PHILIPPINES	74 41.4E	330E	2.5	14.9	73	15	12	87	104X	...	34	15.0	...	46X	...	21.00
SINGAPORE	72 2.2E	2,240E	3.1	16.2	44	31	15	75A	96Y	72A	33	...	99A	57Y	24	8.25Y
SYRIA	75 7.4	660	3.6	6.9	39	25	26	35	89	70	35	2.0	92	45	21	12.00
THAILAND	73 40.7E	310E	4.0NF	20.7F	65	9	15	82	87X	93C	32	3.0 U	91C	21X	24	2.00
TURKEY	72 37.9D	600D	...	13.0DR	...	...	...	...	105XCY	...	34DY	...	...	22XY	27DY	5.31BY
YEMEN	73 6.4E	180E	0.5	4.0	48P	21P	23P	10	15X	18	36	5.0	75	2X	19	0.09BY
YEMEN P.D.R.	72 1.6E	220E	2.3A	12.6	79	12	*	10	70X	31	29	10.0	99	12X	20	0.08AY
SUMMARY FOR DEVELOPING COUNTRIES:																
NUMBER OF COUNTRIES:			75	73	70	69	69	71	89	55	78	53	55	79	75	74
RANGE:			(0.5= 12.0P)	(3.8= 32.3)	(25= 96)	(0= 52)	(0= 40)	(5= 98)	(10= 184X)	(17= 99)	(19= 65)	(1.8= 25.0)	(7= 99)	(.4= 75.0)	(9= 43)	(.01= 23.0)
QUARTILES: UPPER			5.2	22.1	55	31	22	75	87	75	46	8	80	29	26	6.0
MEDIAN:			4.0	18.0	45	23	15	50	71	50	38	5	63	16	23	2.00
LOWER			3.0	13.9	38	16	12	21	52	30	33	3	25	9	20	.9

SYMBOLS: ... DATUM UNAVAILABLE; - MAGNITUDE NIL OR NEGLIGIBLE; ? QUESTIONABLE; * INCLUDES PART-TIME STUDENTS; ** COMBINED WITH PRIMARY

A=1970 OR BEFORE; B=1971; C=1972; D=1973; E=1974; F=1975; G=1976

M=CURRENT PRICES; N=GDP; P=INCLUDING FOREIGN AID; Q=CENTRAL GOVT, ONLY; R=MINISTRY OF EDUCATION (MOE) ONLY; S=MOE AND STATE GOVT, ONLY; T=EXCLUDING CENTRAL GOVT, U=PUBLIC ONLY; V=INCLUDING PRIVATE EXPENDITURE; X=INCLUDING OVERAGED STUDENTS; Y=UNESCO SOURCES

SOURCES: COLUMNS 1 AND 2 WORLD BANK ATLAS OR IBRD MISSIONS; 3 TO 14 IBRD MISSIONS AND/OR UNESCO STATISTICAL YEARBOOK

COMPARATIVE EDUCATION DATA ARE USEFUL IN THE EVALUATION OF VARIOUS EDUCATION SYSTEMS AND ANALYSIS OF RELATIVE STAGES OF EDUCATIONAL DEVELOPMENT BETWEEN VARIOUS COUNTRIES, HOWEVER, ON THE BASIS OF THE PRESENT DATA, CROSS-NATIONAL COMPARISON SHOULD BE APPROACHED WITH GREAT CAUTION. DATA PRESENTED IN THE ABOVE TABLE HAVE BEEN COLLECTED LARGELY BY THE BANK MISSIONS FROM GOVERNMENT SOURCES; THE REMAINDER ARE STAFF ESTIMATES OR DATA FROM UNESCO. EFFORTS HAVE BEEN MADE TO STANDARDIZE DEFINITIONS AND WITHIN LIMITS, TO CHECK THE ACCURACY OF THE DATA. NEVERTHELESS, SUCH DATA ARE STILL IMPERFECT IN SEVERAL RESPECTS AND THE BANK IS WORKING TO IMPROVE THEM PROGRESSIVELY ON THE OCCASION OF ITS OPERATIONAL WORK. IN THE USE OF THESE DATA, THE FOLLOWING QUALIFICATIONS SHOULD BE BORNE IN MIND:

(1) "EDUCATION" AS DEFINED IN THE TABLE INCLUDES ALL EDUCATION AND TRAINING, FORMAL AND NON-FORMAL;

(2) "PRIMARY EDUCATION REFERS TO EDUCATION AT THE FIRST LEVEL AND "SECONDARY" EDUCATION REFERS TO ALL EDUCATION AT THE SECONDARY LEVEL REGARDLESS OF TYPE (E.G. GENERAL, TECHNICAL, AGRICULTURAL) ;

(3) "LITERACY RATES" (COL.6) ARE OFTEN OBTAINED FROM COUNTRY CENSUSES. IN MANY COUNTRIES THEY ARE ONLY APPROXIMATIONS AND IT IS DOUBTFUL THAT ANY UNIFORM DEFINITION OF "LITERATE" HAS BEEN FOLLOWED CONSISTENTLY;

(4) "PUBLIC EXPENDITURE IN EDUCATION" (COLS.3,4 AND 5) REFER TO ALL CAPITAL AND RECURRENT EXPENDITURES DEVOTED TO EDUCATION BY PUBLIC AND QUASI-PUBLIC AGENCIES;

(5) "ENROLLMENT RATIOS" (COLS 7, 12 AND 14) REFER TO SCHOOL YEAR AND MEAN THE PERCENTAGE OF ELIGIBLE CHILDREN ENROLLED FULL-TIME IN THE APPROPRIATE SCHOOL, PUBLIC AND PRIVATE BY LEVEL. THEY ARE OFTEN SUBJECT TO A WIDE MARGIN OF ERROR IN THE DEVELOPING COUNTRIES OWING TO VARIATION IN THE ACCURACY OF BASIC DATA (I.E. AGE-SPECIFIC POPULATION AND ENROLLMENTS). ENROLLMENT FIGURES FREQUENTLY ARE HIGHER THAN THE NUMBER OF STUDENTS ACTUALLY IN SCHOOL. OVERAGED STUDENTS WHOSE INCLUSION IS INDICATED BY FOOTNOTES ALSO CAN INFLATE THE RATIOS.

ANNEX 1A

GNP AND EMPLOYMENT BY MAJOR SECTORS, 1965, 1970 AND 1975, AND TARGETS FOR 1981

	GNP (W Billion)				Employment (Million)			
	1965	1970	1975	1981	1965	1970	1975	1981
Agric., For., Fisheries	309	724	2,303	2,942	4.8	4.9	5.4	5.6
Mining, Manufacturing	159	591	2,697	5,643	0.8	1.4	2.3	3.5
Soc.[a/] and Other Sectors	337	1,274	4,080	6,457	2.5	3.4	4.1	5.1
Totals	805	2,589	9,080	15,042	8.2	9.7	11.8	14.2

a/ SOC = Social Overhead Capital

Note: 1981 GNP estimates in 1975 prices.

ANNEX 1B

GNP AND EMPLOYMENT BY MAJOR SECTORS, 1965, 1970 AND 1975, AND TARGETS FOR 1981 (IN PER CENT)

	GNP				Employment			
	1965	1970	1975	1981	1965	1970	1975	1981
Agric., For., Fisheries	38.4	28.0	25.4	19.6	58.6	50.5	45.9	39.3
Mining, Manufacturing	19.8	22.8	29.7	37.5	10.4	14.3	19.1	24.6
Soc., and Other Sectors	41.8	49.2	44.9	42.9	31.0	35.2	35.0	36.1
Totals	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Note: Differences in totals due to rounding.

Source: Economic Planning Board

ANNEX 2

REQUIREMENTS AND SUPPLY ESTIMATES FOR TECHNICAL MANPOWER, BY MAJOR CATEGORIES, 1977-81 (IN THOUSAND)

	Requirements	Supply	Surplus (+)/Deficit (-)
Scientists/Engineers	54	60	+6
Technicians	65	57	-8
Skilled Workers	843	529	-314
("Craftsmen")	(469)	(449)	(-20)
("Operatives")	(374)	(80)	(-294)

Note: Estimates are limited to requirements of heavy and chemical industries, and to relevant sources of supply.

Source: Ministry of Science and Technology, Korean Development Institute and Mission estimates

ANNEX 3

KOREA VOCATIONAL TRAINING PROJECT

IN-PLANT VOCATIONAL TRAINING, 1976 1/

Training Fields \ Type of Course	Total	Basic Training	Adaptation Training Courses	Upgrading Training Courses	Refresher Training Courses
Total	31,024	14,330	15,648	501	545
Metal materials & manufacturing trades	1,302	694	608	-	-
Metal Cutting	2,897	1,712	928	27	280
Transportation & Storage	1,289	983	227	79	
Electrical trades	2,643	879	1,764	-	-
Electronics & telecommunication trades	3,202	1,421	1,781	-	-
Textile trades	12,592	56,499	5,591	187	315
Construction trades	-	-	-	-	-
Chemical industry trades	2,236	395	1,706	135	-
Wood working trades	1,060	272	788	-	-
Ceramic industry trades	333	70	263	-	-
Printing	83	59	24	-	-
Mining	849	519	257	73	-
Handicraft	-	-	-	-	-
Food Processing trades	1,494	574	920	-	-
Leather working trades	476	141	335	-	-
Painting	46	46	-	-	-
Others	522	66	456	-	-

1/ Data are limited to 365 (out of a total of 411) firms conducting in-plant training

Source: Office of Labor Affairs

KOREA - VOCATIONAL TRAINING PROJECT

VTI SYSTEM - PRESENT AND PLANNED SIZE AND STRUCTURE

			TRADES AND ENROLLMENTS																			
INSTITUTION/ LOCATION	Date Started/ Planned	Funding Source	Foundry	Pattern Making	Lathe	Milling	Machine Fitting	Welding	Sheet Metal	Elec. Fitting	Electronics	Textile Machine Fitting	Metal Plating	Wood M/C	Offset Print.	Pipe Fitting	Plumbing	Auto	Radio & TV	Indus. Electronics	Tool & Die Making	Wood Arts	TOTAL
Daegu	1975	ADB	x	x	x		x	x	x	x	x	x											570
Chunchon	1975	"	x	x	x		x	x	x	x	x		x										570
Inchon	1976	"	x	x	x		x	x	x	x	x			x	x								690
Kwang Ju	1976	"	x	x	x		x	x	x	x	x												390
Sung Nam	1977	"			x	x	x																630
Daejon	1977	Japan			x		x	x		x	x		x										480
Changwon	1977	Belgium			160		80		120												40 1/		400
Busan	1972	F.R.Germ.			60		60	60		60											90 2/		330
Cheong Ju	1978	IBRD			90		90	90		90													360
Junju	"	"			90		90	90		90													360
Jinju	1979	"			90	90	90			90													360
Ulsan	"	"			90	90	90	90															360
Gumi	1978	"			90		90			90						90							360
Soonchon	"	"			90		90	90									90						360
Pohang	"	"			90		90	90									90						360
Sa Sang	1979	IBRD			90	90	90	90		90													450
Hong Sung	"				90		90	90	90	90													450
Mokpo	"	"			90		90	90		90						90							450
Banwol	1980	"			90		90	90		90						90							450
Kunsan	"	"			90		90	90		90							90						450
Geojae	"	"			90		90	90		90						90							450
Wonju	"	"			90		90	90		90							90						450
Kangneung	"	"			90		90	90	90	90													450
Chungsoo 3/	1973	ROK/Private			50	25	25	50										25	25	25			275
TOTAL VTIs																							10455
CVTI Seoul	1968	ROK/UNDP	62	42	MACHINING 58		52	69	52	62	57					48		52		57	51		662

Source: Office of Labor Affairs and Mission estimates

Note: x denotes unavailability of enrollment data by trade

1/ 2-year course
2/ 3-year course
3/ not including courses in embroidery (60 trainees)

ANNEX 4

KOREA - VOCATIONAL TRAINING PROJECT

C.V.T.I. - INSTRUCTOR TRAINEES - ENROLLMENT AND OUTPUT

	Year	Total Enrollment	Graduates 1/						Total for Trades Excluded	Supply	
			Total	To Military Service		To Private Industry		To VTIs		Net Available (1) - (5)	
				No.	%	No.	%				
			(1)	(2)		(3)		(4)	(5)	(6)	
Actual	1972	n.a.	67	-	-	3	5	64			
	1973	n.a.	151	22	15	6	4	123			
	1974	n.a.	114	55	48	6	5	53			
	1975	n.a.	176	85	48	22	8	69			
	1976	662	160	35	22	28	18	97			
Projected	1977	680	270						88	182	
	1978	700	380						125	255	
	1979	725	343						59	284	
	1980	750	343						59	284	
	1981	750	368						59	309	
	1982	750	368						59	309	

1/ Assumptions:

(a) New graduates bonded and exempt from military service

(b) Excludes trades not represented in IBRD project

(c) Nominal loss 2% over course

Source: Office of Labor Affairs and Mission estimates

ANNEX 5A

KOREA - VOCATIONAL TRAINING PROJECT

INSTRUCTOR STOCKS AND REQUIREMENTS, 1977-81

INSTITUTION/ LOCATION	Date Started/ Planned	Funding Source	Chief 1/ Instr.	Authorized Posts			Instructors Required				
				Total	Filled	Vacant	1977	1978	1979	1980	1981
Daegu	1975	ADB	9	63	57	6					
Chunchon	1975	"	9	56	37	19					
Inchon	1976	"	10	76	67	9					
Kwangju	1976	"	8	43	38	5					
Sungnam	1977	"	3	73			73				
Daejon	1977	Japan	6	54			54				
Changwon	1977	Belgium	4	27			27				
Busan	1972	F.R.Germany	5	40	38	2					
Cheongju	1978	IBRD	4	40				40			
Junju	1978	"	4	40				40			
Jinju	1979	"	4	40					40		
Ulsan	1979	"	4	40					40		
Gumi	1978	"	4	40				40			
Soonchon	1978	"	4	40				40			
Pohang	1978	"	4	40				40			
Kimhae	1979	IBRD	5	50					50		
Naju	1979	"	5	50					50		
Nonsan	1979	"	5	50					50		
Weonju	1979	"	5	50					50		
Chungmu	1980	"	5	50						50	
Hongseong	1980	"	5	50						50	
Kimcheon	1980	"	5	50						50	
Pyeongtaek	1980	"	5	50						50	
Chungsoo	1973	ROK/PRV	8	31	27	4					
TOTALS			130	1,143	264	45	154	200	280	200	
CVTI Seoul	1968	ROK/UNDP		98	47	51	3	3	3	3	

1/ One per trade

Source: Office of Labor Affairs and Mission estimates

ANNEX 5B

KOREA - VOCATIONAL TRAINING PROJECT

PROJECTED INSTRUCTOR SUPPLY AND DEMAND, 1977-82

	Estimated Total Supply and Stock						
Output	1976 1/	1977	1978	1979	1980	1981	1982
Present Stock	264 2/	238	214	193	173	156	140
February 1977		182 3/	173	164	156	148	141
1978			255 3/	242	230	219	208
1979				284 3/	270	256	244
1980					284 3/	270	256
1981						309 3/	294
1982							309 3/
Total Supply	264	420	642	883	1,113	1,358	1,592
Total Demand 4/	309	463	663	889	1,143	1,143	1,143
Shortfall	-45	-43	-21	-6	-30	+215	+449

Assumptions

(a) future VTI enrollments as in Annex 3C; no further increase after 1980

(b) stable attrition rate of 5% per annum for bonded instructors

---

1/ actual figures

2/ from Annex 5B

3/ from Annex 5A, col. 6

4/ sum of relevant annual instructor requirements figure, in Annex 3B and of "Shortfall"and Present Stock" figures from previous year

Source: Mission estimates

ANNEX 6

VOCATIONAL TRAINING BUREAU (VTB)
BUDGET ALLOCATIONS FOR 1976 AND 1977,
BY MAJOR TYPE OF EXPENDITURE (W MILL.)

	1976	1977
Salaries and Allowances	923	1,391
Workshop Materials and Fuel	518	585
Utilities and Other Services	500	399
Office Supplies and Instructional Materials	120	121
Maintenance	22	32
Subsidies and Other Transfers	492	960
Other Recurrent Expenditure	53	54
Total Recurrent Expenditure	2,628	3,542
Land Purchases	122	-
Civil Works and Professional Fees	3,872	3,745
Equipment	1,085	3,611
Debt Service	105	336
Total Capital Expenditure	5,184	7,692
Grand Total	7,812	11,234

Source: OLA

KOREA - VOCATIONAL TRAINING PROJECT

SUMMARY OF PROJECT COSTS 1/

IBRD/IDA Education Projects
Architects Appraisal Form II-B

Project ESTIMATED PROJECT COSTS

Country SUMMARY OF

ESTIMATED COSTS IN MILLION OF Won (1977 PRICES)

No.	PROJECT ITEM	Site Development	BUILDINGS: Academic, Admin. & Communal	BUILDINGS: Boarding	BUILDINGS: Staff Housing	BUILDINGS: Total	FURNITURE: Academic, Admin. & Communal	FURNITURE: Boarding	FURNITURE: Total	EQUIPMENT: Academic, Admin. & Communal	EQUIPMENT: Boarding	EQUIPMENT: Total	TOTAL PHYSICAL FACILITIES (Excl. Prof. Fees)	PROFESSIONAL SERVICES: Consult. Arch.	PROFESSIONAL SERVICES:	TECHNICAL ASSISTANCE	EST. TOTAL COSTS: Million of Won	EST. TOTAL COSTS: in '000 of US$*
V101	Hongseong	135	525	155		680	60	20	80	755	20	775	1,670	50	-	-	1,720	3,550
V102	Chungmm (Geoje)	135	525	155		680	60	20	80	765	20	785	1,680	50	-	-	1,730	3,565
V103	Kimcheon	135	525	155		680	60	20	80	765	20	785	1,680	50	-	-	1,730	3,565
V104	Sasang	135	525	155		680	60	20	80	1,330	20	1,350	2,245	50	-	-	2,295	4,730
V105	Naju	135	525	155		680	60	20	80	765	20	785	1,680	50	-	-	1,730	3,565
V106	Nonsan	135	525	155		680	60	20	80	755	20	775	1,670	50	-	-	1,720	3,550
V107	Pyeongtaek (Banweol)	135	525	155		680	60	20	80	765	20	785	1,680	50	-	-	1,730	3,565
V108	Wyeonju	135	525	155		680	60	20	80	755	20	775	1,670	50	-	-	1,720	3,550
	Sub-total	1,080	4,200	1,240		5,440	480	160	640	6,655	160	6,815	13,975	400	-	-	14,375	29,640
W101	Central Vocational Training Institute (CVTI)									670		670	670				670	1,380
	Technical Assistance Specialists															145	145	300
	TOTAL BASE COST — Won '000	1,080	4,200	1,240		5,440	480	160	640	7,325	160	7,485	14,645	400		145	15,190	
	(Excluding) ( ) (Contingencies) — US$ '000	2,230	8,660	2,560		11,220	990	330	1,320	15,100	330	15,430	30,200	820		300		31,320
	For. Exch. %	15%				25%			25%			90%		10%				
	CONTINGENCIES — % Base Cost	35.2%				39.2%			34.4%			29%		32.5%		33%		32%
	Won mill. '000	380				1,920			220			2,170	4,690	130		50	4,870	
	US$ '000	780				3,960			460			4,480	9,680	260		100		10,040
	For. Exch. %																	
	TOTAL PROJECT COST — '000	1,460				7,360			860			9,655	19,335	530		195	20,060	
	(Incl. Contingencies) — US$ '000	3,010				15,180			1,780			19,910	39,880	1,080		400		41,360
	TOTAL FOR. EXCH. — % Total Cost	15%				25%			25%			90%	56.6%	10%		80%		55.7%
	COMPONENT — US$ '000	450				3,800			450			17,920	22,620	110		320		23,050

Sheet ___ of ___ sheets.

Sheet ___ of ___ sheets.

* Currency Equivalent: US$1.00 = _____

ANNEX 7

Source: Mission estimates

1/ Excluding the cost of staff housing (to be financed by the Government) and the UNDP and bilaterally financed technical assistance.

6/9/77

KOREA - VOCATIONAL TRAINING PROJECT

CONTINGENCY ALLOWANCES 1/

(Estimates in '000 of US Dollars)

Country ___ PROJECT COST ___ Education Project ___ CONTINGENCY ___ ALLOWANCES

	SITE DEVELOPMENT			BUILDINGS			FURNITURE			EQUIPMENT			PROFESSIONAL SERVICES						TECHNICAL ASSISTANCE						TOTAL		
													ARCH. CONSULTANTS						EXPAT. SPECIALISTS			STAFF DEVELOPMENT*					
	Local	Foreign	Total	Local	Foreign	Total	Local	Foreign	Total	Local	Foreign	Total	Local	Foreign	Total	Local	Foreign	Total	Local	Foreign	Total	Local	Foreign	Total	Local	Foreign	Total
Base Cost Estimate (/1977)																											
Local Foreign Breakdown	1895	335	2230	8410	2810	11220	990	330	1320	1540	13890	15430	740	80	820				60	240	300				13635	17685	31320
% Local & Foreign of Total	85	15	100	75	25	100	75	25	100	10	90	100	90	10	100				20	80	100				43.5	56.5	100
Physical Contingency																											
% of Base Cost	10	10	10	10	10	10	10	10	10	7.5	7.5	7.5	10	10	10				10	10	10				9.7	8.0	8.8
Amount	190	30	220	840	280	1120	95	35	130	120	1040	1160	70	10	80				5	25	30				1320	1420	2740
Base Cost + Physical Contingency	2085	365	2450	9250	3090	12340	1085	365	1450	1660	14930	16590	810	90	900				65	265	330				14955	19105	34060
Expected Price Increases																											
% Base + Physical Conting.	23	23	23	23	23	23	23	23	23	20	20	20	20	20	20				20	20	20				21.4	20.7	21.5
Amount	475	85	560	2130	710	2840	245	85	330	330	2990	3320	160	20	180				15	55	70				3355	3945	7300
Total Contingecy Allowances																											
Amount	665	115	780	2970	990	3960	340	120	460	450	4030	4480	230	30	260				20	80	100				4675	5365	10040
% Local & Foreign of Total	85	15	100	75	25	100	75	25	100	10	90	100	90	10	100				20	80	100				46.5	53.5	100
Total Est. Project Costs (including Contingencies)	2560	450	3010	11380	3800	15180	1330	450	1780	1990	17920	19910	970	110	1080				80	320	400				18310	23050	41360
% Local & Foreign of Total	85	15	100	75	25	100	75	25	100	10	90	100	90	10	100				20	80	100				44.3	55.7	100

Source: Mission estimates

1/ Excluding the cost of staff housing (to be financed by the Government) and the UNDP and bilaterally financed technical assistance.

KOREA - VOCATIONAL TRAINING PROJECT

FORECAST OF DISBURSEMENT

Implementation[a/] Semester	Disbursement				Undisbursed Balance	
	Semesterly		Cumulative			
	'000 US$	%	'000 US$	%	'000 US$	%
1	-	-	-	-	23,000	100.0
2	100	0.4	100	0.4	22,900	99.6
3	1,200	5.2	1,300	5.6	21,700	94.4
4	2,200	9.6	3,500	15.2	19,500	84.8
5	3,000	13.0	6,500	28.2	16,500	71.8
6	5,000	21.8	11,500	50.0	11,500	50.0
7	6,000	26.1	17,500	76.1	5,500	23.9
8	3,500	15.2	21,000	91.3	2,000	8.7
9	2,000	8.7	23,000	100.0	0	0
10						

a/ From estimated date of loan effectiveness

Source: Mission estimates

ANNEX 10

KOREA - VOCATIONAL TRAINING PROJECT

INITIAL IMPLEMENTATION SCHEDULE

Main Activities	Responsible Authorities	1977 J F M A M J J A S O N D	1978 J F M A M J J A S O N D
A. Vocational Training Bureau (VTB) Management			
1. Preparation of staff development plan	OLA	X X X	
2. Approval of staff development plan	EPB/MOGA	X	
3. Submission for Bank review	OLA/EPB/Bank	X	
4. Selection of staff for 1977	OLA	X X X	
5. Appointment of staff for 1977	OLA/GAO	X X X	
6. Selection of staff for 1978	OLA		X X X
7. Appointment of staff for 1978	OLA/GAO		X X X
B. Project Execution			
8. Appointment of project architect	OLA	X X X X	
9. Appointment of project engineer	OLA	X X X X	
10. Appointment of equipment specialist	OLA	X X X X	
11. Selection of consultant architects	OLA/PIU	X X X	
12. Appointment of consultant architects	OLA/PIU	X X	X
13. Submission for Bank review	OLA/PIU/Bank	X	X
14. Briefing of consultant architects	PIU/Bank	X	X X
C. Civil Works			
Phase I (Three VTIs)			
15. Acquisition of sites	PIU/PG	X X X	
16. Preparation of standard design and site layouts	PIU/CA	X X	X
17. Submission for Bank review	PIU/Bank	X	X X
18. Preparation of tender documents	PIU/CA	X	X X X X
19. Invitation for bids	PIU/CA/OSROK		X X X
20. Bid period and evaluation	PIU/CA/OSROK		X X X
21. Submission for Bank review	PIU/Bank		X X X
22. Contract awards	PIU/OSROK		X X X X
23. Construction period	PIU/CA/ Contractor		X X X X X X X
Phase II (Five VTIs)			
24. Acquisition of sites	PIU/PG		X X X X X
25. Preparation of site layouts	PIU/CA		X X X
26. Submission for Bank review	PIU/Bank		X X X X
27. Preparation of tender documents	PIU/CA		X
28. Invitation for bids	PIU/CA/OSROK		
29. Bid period and evaluation	PIU/CA/OSROK		
30. Submission for Bank review	PIU/Bank		
31. Contract awards	PIU/OSROK		
32. Construction period	PIU/CA/ Contractor		
D. Furniture and Equipment			
33. Preparation of master lists	PIU	X X X	X X
34. Submission for Bank review	PIU/Bank	X	X X X
35. Preparation of tender documents	PIU/OSROK	X	X X X X X X X X
36. Invitation for bids	PIU/OSROK		X X X X X
37. Bid period and evaluation	PIU/OSROK		
38. Submission for Bank review	PIU/OSROK/Bank		
39. Contract awards	PIU/OSROK		
40. Procurement	PIU/OSROK/ Manufacturer		
E. Technical Assistance			
41. Preparation of terms of reference for experts	PIU	X X X	X X X
42. Submission for Bank review	PIU/Bank	X	X X X X
43. Recruitment of experts	PIU	X	X X X X X X
44. Selection of experts	PIU/OLA		X X X X X X X
45. Appointment of experts	PIU/OLA		X X X X X
46. Experts services period	PIU/Experts		X X X X X
47. Selection of fellowships	PIU	X X X	X X X X
48. Fellowships training period	PIU/Fellows		X X X X X X X X X X X X

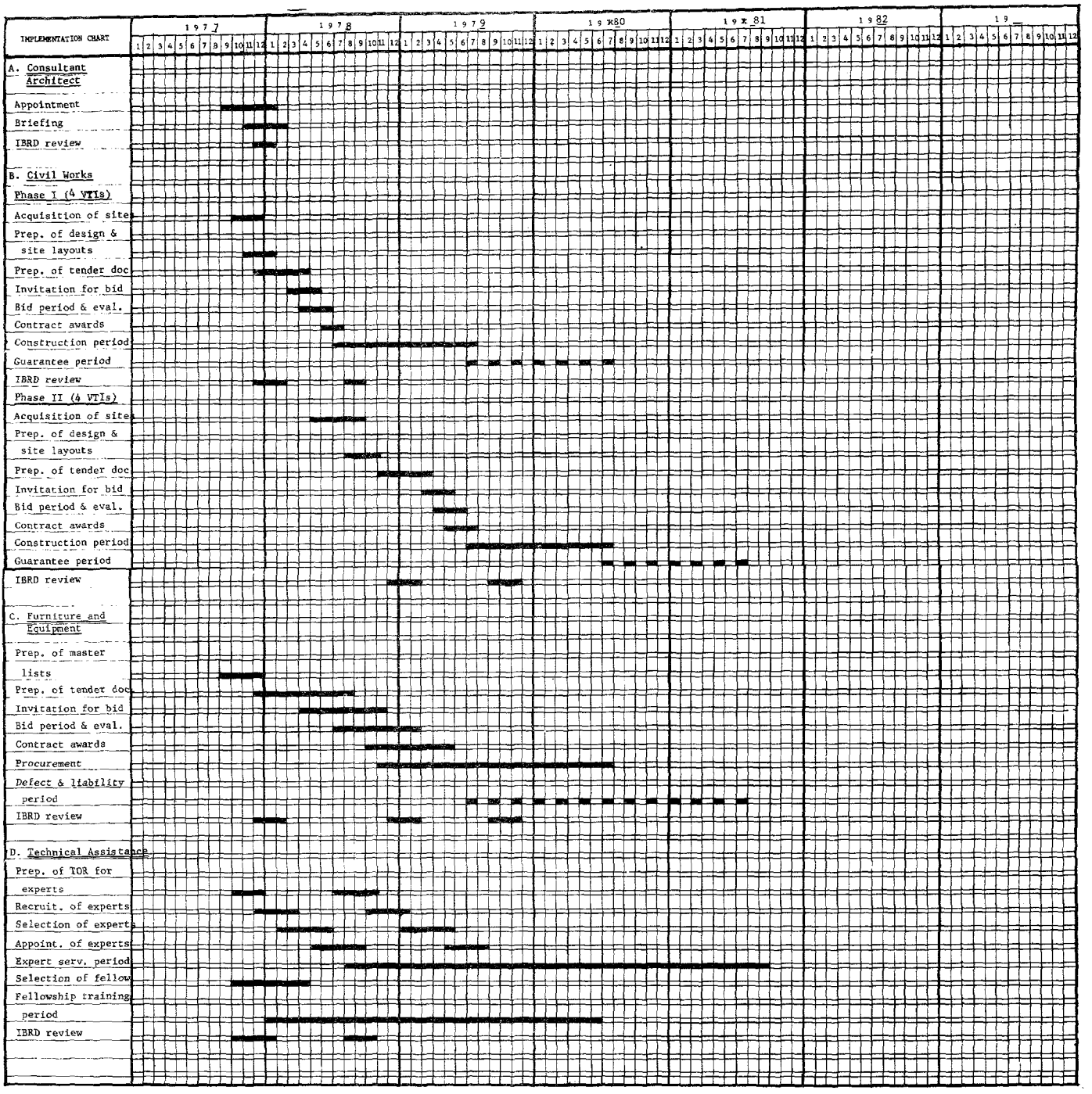
OLA - Office of Labor Affairs
EPB - Economic Planning Board
MOGA - Ministry of General Affairs
PIU - Project Unit
CA - Consultant Architects
OSROK - Office of Supply Republic of Korea

Source: Mission estimates

KOREA - VOCATIONAL TRAINING PROJECT

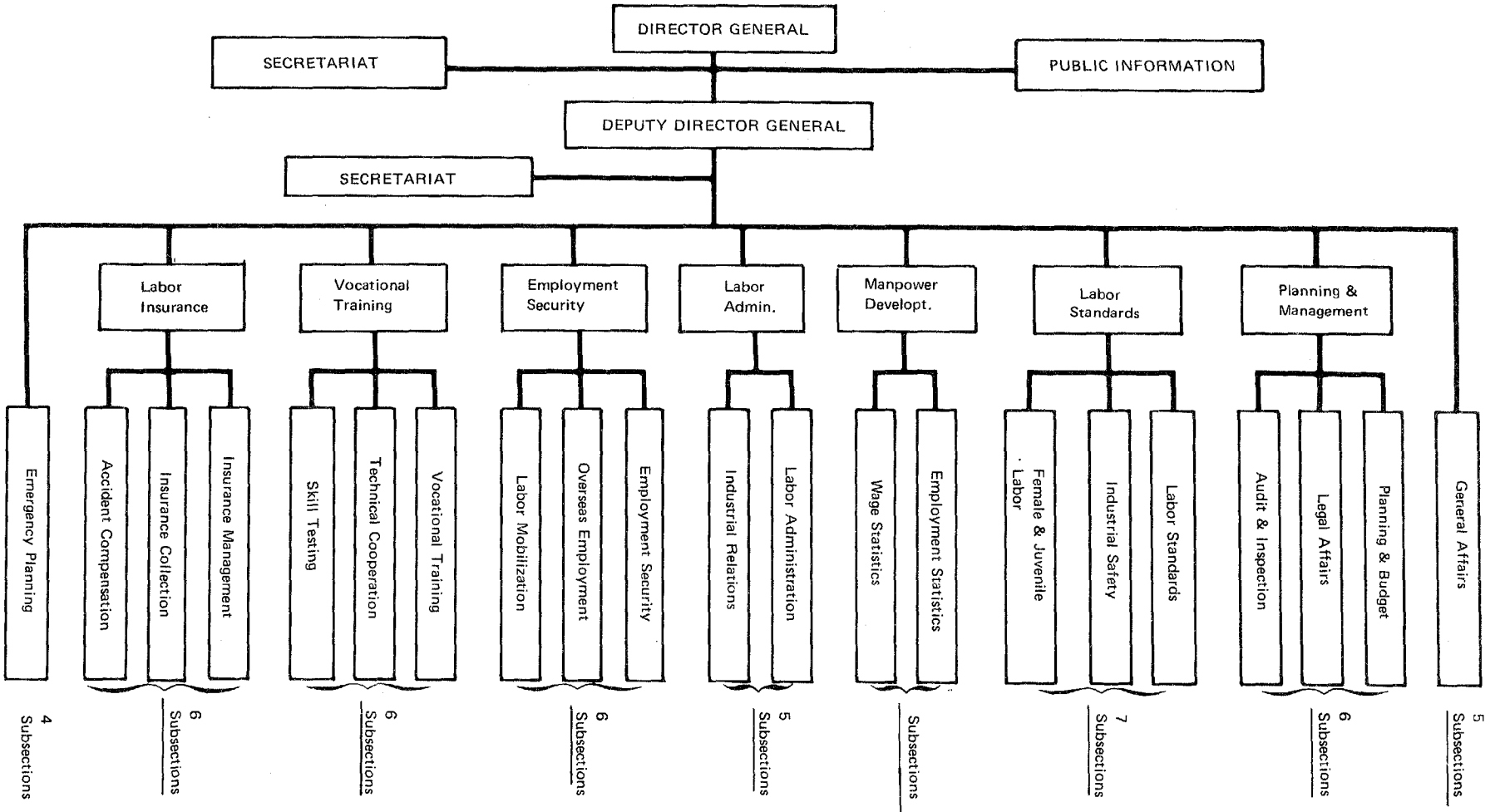
ANNEX 11

IMPLEMENTATION SCHEDULE



Source: Mission estimates

KOREA – VOCATIONAL TRAINING PROJECT
APPRAISAL REPORT
ADMINISTRATIVE STRUCTURE OF OLA

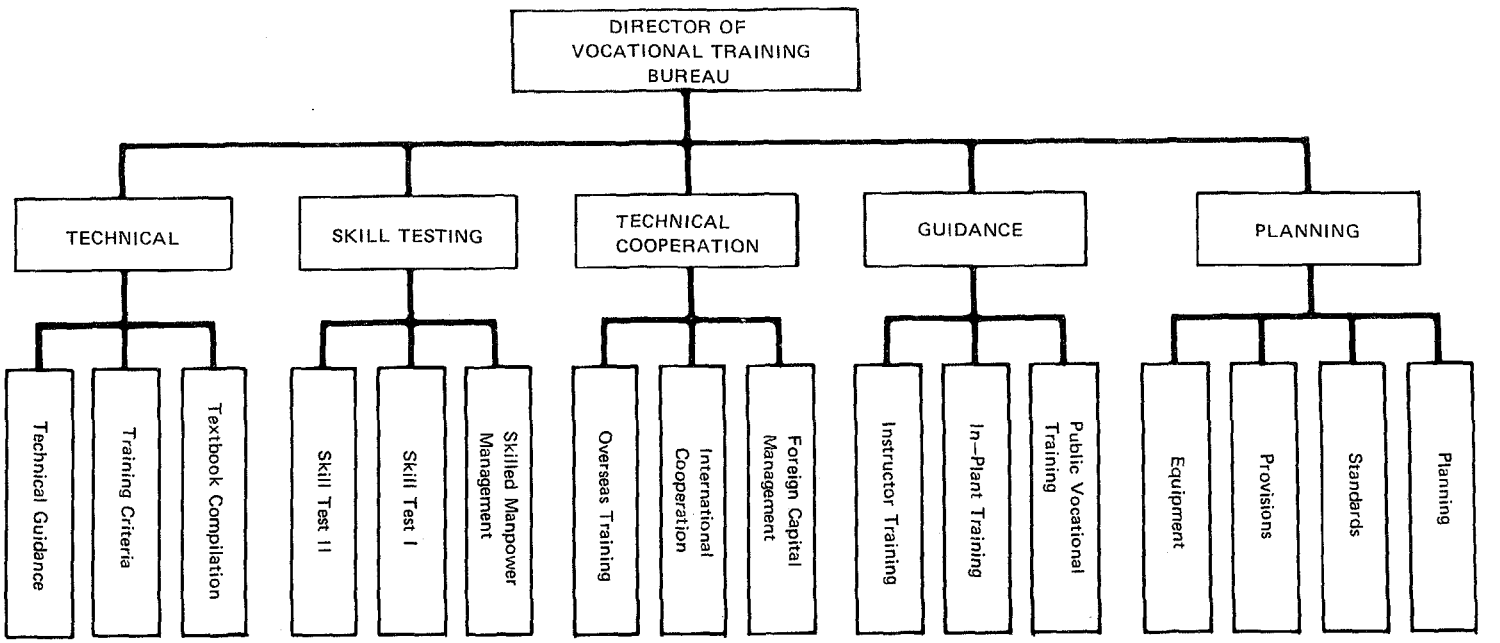


Source: Office of Labor Affairs

World Bank–17032

CHART 1

KOREA – VOCATIONAL TRAINING PROJECT
PROPOSED STRUCTURE FOR VOCATIONAL TRAINING BUREAU IN OLA



Note: Double lines indicate existing sections

Source: Office of Labor Affairs

World Bank–17033

CHART 2

IBRD 12886
MAY 1977